

## STORMWATER DIVISION CODING SHEET

PERMIT NO.	NCS000050
DOC TYPE	<input type="checkbox"/> FINAL PERMIT <input checked="" type="checkbox"/> MONITORING INFO <input type="checkbox"/> APPLICATION <input type="checkbox"/> COMPLIANCE <input type="checkbox"/> OTHER
DOC DATE	<input type="checkbox"/> <u>2018/02/28</u> YYYYMMDD

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

Permit Number NCS NCS000050

**SAMPLES COLLECTED DURING CALENDAR YEAR: 2018**

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

FACILITY NAME SCM Metal Products, Inc

COUNTY Durham

PERSON COLLECTING SAMPLE(S) Westley Riscili

PHONE NO. (919) 544-8090

CERTIFIED LABORATORY(S) Pace Analytical

Lab # 40

Lab # \_\_\_\_\_

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Flow (if app.)	Total Rainfall	Total Copper	Total Zinc	Total Suspended Solids	pH		
	mo/dd/yr	MG	inches	(mg/l)	(mg/l)	(mg/l)	(mg/l)	Standard Units		
1	10/9/18	NA	0.10	1.02	0.06	ND	8.0			
2	10/9/18	NA	0.10	0.79	RECEIVED	2.9	7.2			
3	10/9/18	NA	0.10	1.06	0.04	8.4	7.5			
				OCT 23 2018						
				CENTRAL FILES DWR SECTION						

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no  
(if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Flow (if applicable)	00556	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	00530	00400	New Motor Oil Usage
	mo/dd/yr	MG	inches	mg/l	mg/l	mg/l	unit	gal/mo	

**STORM EVENT CHARACTERISTICS:**Date 10/9/18Total Event Precipitation (inches): 0.10

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

**Mail Original and one copy to:**

Division of Water Quality

Attn: Central Files

1617 Mail Service Center

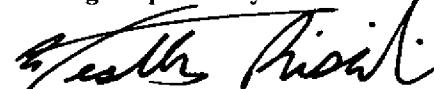
Raleigh, North Carolina 27699-1617

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."



(Signature of Permittee)

10/16/18  
(Date)



PaceAnalytical

www.pacelabs.com

6701 Conference Drive, Raleigh, NC 27607  
ph: (919) 834-4984, fax: (919) 834-8497  
NCWW Cert#67, NCDW Cert#37731

# Chain of Custody

W.O. # 92402767

Report Results To:

Company: SCM Metal Products, Inc. Bill To: SAME

Address: 2601 Wicker Drive \_\_\_\_\_

RTP, NC 27709

Attn: Westley Riscigli

Phone: 919-287-9891

Fax: 919-544-8332

Sampled by (signature): \_\_\_\_\_

Project Reference: \_\_\_\_\_

Project Number: \_\_\_\_\_

Purchase Order #: PO16448

Standard Report Delivery

Rush Report Delivery (w/surcharge)

"Rush projects are subject to prior approval by the laboratory"

Requested Due Date: \_\_\_\_\_

Sample ID	Sample Description	Date Collected	Method	Analyst	Comments	Storage Temp
Outfall#1	15:22		SW	Total Copper, Total Zinc, TSS		J01
pH 7.97 2 Bottles	10-9-18					
Outfall#2	15:34		SW	Total Copper, Total Zinc, TSS		J02
pH 7.17 2 Bottles	10-9-18					
Outfall#3	15:40		SW	Total Copper, Total Zinc, TSS		J03
pH 7.47 2 Bottles	10-9-18					

Relinquished by (signature) <i>T. Gestet</i>	Received by (signature) <i>D. Wallace</i>	Date 10/9/18	Time 1635
Relinquished by (signature)	Received by (signature)	Date	Time
Relinquished by (signature)	Received by (signature)	Date	Time

Receipt Conditions (Lab Use Only)

4±2°C  Temp: 17.9 °C

Res. Chlorine

Absent  Present  n/a

Add preserv. <2%

Yes  No  n/a

Base preserv. >12%

Yes  No  n/a

## ANALYTICAL RESULTS

Project: Outfall Sampling  
Pace Project No.: 92402767

Sample: Outfall #1	Lab ID: 92402767001	Collected: 10/09/18 15:22	Received: 10/09/18 16:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D-2011							
Total Suspended Solids	ND	mg/L	2.5	1			10/10/18 16:48	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Rev 4.4 1994 Preparation Method: EPA 200.7 Rev 4.4 1994							
Copper	1020	ug/L	5.0	1	10/12/18 02:19	10/12/18 16:50	7440-50-8	
Zinc	58.1	ug/L	10.0	1	10/12/18 02:19	10/12/18 16:50	7440-66-6	

Sample: Outfall #2	Lab ID: 92402767002	Collected: 10/09/18 15:34	Received: 10/09/18 16:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D-2011							
Total Suspended Solids	2.8	mg/L	2.5	1			10/10/18 16:49	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Rev 4.4 1994 Preparation Method: EPA 200.7 Rev 4.4 1994							
Copper	790	ug/L	5.0	1	10/12/18 02:19	10/12/18 16:53	7440-50-8	
Zinc	42.5	ug/L	10.0	1	10/12/18 02:19	10/12/18 16:53	7440-66-6	

Sample: Outfall #3	Lab ID: 92402767003	Collected: 10/09/18 15:40	Received: 10/09/18 16:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D-2011							
Total Suspended Solids	8.4	mg/L	2.5	1			10/10/18 16:49	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Rev 4.4 1994 Preparation Method: EPA 200.7 Rev 4.4 1994							
Copper	1060	ug/L	5.0	1	10/12/18 02:19	10/12/18 16:57	7440-50-8	
Zinc	37.9	ug/L	10.0	1	10/12/18 02:19	10/12/18 16:57	7440-66-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/S/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 1

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 10/9/18

Time of Inspection: 15:22 pm

Total Event Precipitation (inches): 0.10"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 1 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe, \_\_\_\_\_

Receiving Stream: Unnamed tributary to Northeast Creek, \_\_\_\_\_

Describe the industrial activities that occur within the outfall drainage area: Copper powder production, \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear, \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None, \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5      A few leaves.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7. Is there any foam in the stormwater discharge?** Yes  No

**8. Is there an oil sheen in the stormwater discharge?** Yes  No

**9. Is there evidence of erosion or deposition at the outfall?** Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

The weir should be cleaned out, there is a small amount of silt that has settled in the outfall device.

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/

Facility Name: SCM Metal Products, Inc. Outfall No. 2

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 10/9/18

Time of Inspection: 15:34 pm

Total Event Precipitation (inches): 0.10"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 2 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe into ditch. \_\_\_\_\_

Receiving Stream: Unnamed tributary of Stirrup Iron Creek. \_\_\_\_\_

Describe the industrial activities that occur within the outfall drainage area: Copper Powder Production. \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear. \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None. \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

Pine needles and branches.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe Have branches removed from the outfall to make sure that it does not dam up. \_\_\_\_\_

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**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

*For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>*

Permit No.: N/C/5/0/0/0/0/5/Q/ or Certificate of Coverage No.: N/C/G/\_\_\_/\_\_\_/\_\_\_/\_\_\_/\_\_\_/

Facility Name: SCM Metal Products, Inc. Outfall No. 3

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 10/9/18

Time of Inspection: 15:40 pm

Total Event Precipitation (inches): 0.10"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

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By this signature I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 3 Structure (pipe, ditch, etc.) Pipe into ditch,

Receiving Stream: Unnamed tributary of Stirrup Iron Creek,

Describe the industrial activities that occur within the outfall drainage area: Copper powder production,

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

A few leaves.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7. Is there any foam in the stormwater discharge?**

Yes

No

**8. Is there an oil sheen in the stormwater discharge?**

Yes

No

**9. Is there evidence of erosion or deposition at the outfall?**

Yes

No

This device was replaced and is functioning well. Erosion which led to sediment build-up contributions upstream have been addressed.

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_

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**Note: Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.**

# RECEIVED

JUN 04 2018

CENTRAL FILES  
DWR SECTION

STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT

Permit Number NCS NCS000050

SAMPLES COLLECTED DURING CALENDAR YEAR: 2018

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

FACILITY NAME SCM Metal Products, Inc

PERSON COLLECTING SAMPLE(S) Westley Riscill

CERTIFIED LABORATORY(S) Pace Analytical Lab # 40

Lab # \_\_\_\_\_

COUNTY Durham

PHONE NO. (919) 544-8090

SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.

Part A: Specific Monitoring Requirements

Outfall No.	Date Sample Collected	50050	Total Flow (if applicable)	Total Rainfall	Total Copper	Total Zinc	Total Suspended Solids	pH		
1	mo/dd/yr	MG	inches	(mg/l)	(mg/l)	(mg/l)	(mg/l)	Standard Units		
1	5/16/18	NA	0.50	2.03	0.16	1.5	7.1			
2	5/16/18	NA	0.50	1.40	0.07	6.0	6.8			
3	5/16/18	NA	0.50	1.79	0.04	11.3	6.7			

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month?  yes  no  
(if yes, complete Part B)

Part B: Vehicle Maintenance Activity Monitoring Requirements

Outfall No.	Date Sample Collected	50050	Total Flow (if applicable)	Total Rainfall	00556	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	00530	00400	New Motor Oil Usage
	mo/dd/yr	MG	inches	mg/l			mg/l	unit	gal/mo	

**STORM EVENT CHARACTERISTICS:**

Date 5/16/18  
Total Event Precipitation (inches): 0.50  
Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_  
Total Event Precipitation (inches): \_\_\_\_\_  
Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**  
Division of Water Quality  
Attn: Central Files  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Walter Brinkley  
(Signature of Permittee)

5-29-18  
(Date)

## ANALYTICAL RESULTS

Project: Outfall Sampling  
Pace Project No.: 92384986

**Sample: Outfall #1** Lab ID: 92384986001 Collected: 05/16/18 11:58 Received: 05/16/18 13:39 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	2.5	mg/L	2.5	1			05/17/18 16:22	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	2030	ug/L	5.0	1	05/24/18 15:10	05/25/18 14:35	7440-50-8	
Zinc	159	ug/L	10.0	1	05/24/18 15:10	05/25/18 14:35	7440-66-6	

**Sample: Outfall #2** Lab ID: 92384986002 Collected: 05/16/18 12:07 Received: 05/16/18 13:39 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	6.0	mg/L	4.5	1			05/17/18 16:22	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	1400	ug/L	5.0	1	05/24/18 15:10	05/25/18 14:49	7440-50-8	
Zinc	65.0	ug/L	10.0	1	05/24/18 15:10	05/25/18 14:49	7440-66-6	

**Sample: Outfall #3** Lab ID: 92384986003 Collected: 05/16/18 12:15 Received: 05/16/18 13:39 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	11.3	mg/L	2.5	1			05/17/18 16:22	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	1790	ug/L	5.0	1	05/24/18 15:10	05/25/18 14:52	7440-50-8	
Zinc	40.8	ug/L	10.0	1	05/24/18 15:10	05/25/18 14:52	7440-66-6	

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 1

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 5/16/18

Time of Inspection: 12:15 pm

Total Event Precipitation (inches): 0.50"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 1 Structure (pipe, ditch, etc.) Pipe.

Receiving Stream: Unnamed tributary to Northeast Creek.

Describe the industrial activities that occur within the outfall drainage area: Copper powder production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5      Pollen

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

The weir could be cleaned out, there is a small amount of silt that has settled in the outfall device.

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 2

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 5/16/18

Time of Inspection: 12:07 pm

Total Event Precipitation (inches): 0.50"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

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A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 2 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe into ditch. \_\_\_\_\_

Receiving Stream: Unnamed tributary of Stirrup Iron Creek. \_\_\_\_\_

Describe the industrial activities that occur within the outfall drainage area: Copper Powder Production. \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear. \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None. \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

Pollen and small branches.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 3

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 5/16/18

Time of Inspection: 11:58am

Total Event Precipitation (inches): 0.50"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 3 Structure (pipe, ditch, etc.) Pipe into ditch.

Receiving Stream: Unnamed tributary of Stirrup Iron Creek.

Describe the industrial activities that occur within the outfall drainage area: Copper powder production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5      Leaves and twigs.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

Taking quotes to replace this settling device, as well as additional projects upstream.

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.

# **SCM Metal Products, Inc.**

July 6, 2012

Ms. Bethany A. Georgoulias  
Environmental Engineer  
Stormwater Permitting Unit  
North Carolina Division of Water Quality  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

NPDES Stormwater Permit No. NCS000050  
SCM Metal Products, Inc.  
Durham County

Dear Bethany:

The results of storm water sampling for the first reporting period in 2012 have been received by SCM Metal Products. The results from the first set of samples indicated that the Total Suspended Solids (TSS) was above the benchmark value of 100 mg/l. The value obtained at Outfall 3 was exceedingly high and one obtained at Outfall 1 was slightly above the benchmark value. Also, the copper values obtained at these two sample sites were higher than SCM's recent historical results. Results obtained from subsequent sampling showed the TSS to be within the benchmark value at all the outfalls and all the copper results, except one, to be within the historical result values. The values are presented on the Stormwater Discharge Outfall (SDO) Monitoring Report which is attached to this letter.

A few factors may have contributed to the high TSS. These include:

1. The sampling technique used at the outfalls. Rather than taking the sample at an area of moving water, the collection bottle was placed in a relatively slow-moving portion of the storm water stream. The collection of TSS samples has improved and will be described in the revised Storm Water Monitoring Plan.
2. There had been an extraordinary rain event on the weekend of May 5 when more than two and one-quarter inches fell. This amount of water may have skewed the results of the samples taken three days later by moving a large amount of soil and other material into the storm water streams.
3. The sampling done was the first conducted since grading and drain work was done on the area that feeds Outfall 3. This grading work was done to control flooding in one of our buildings and to minimize erosion. The recently install "crush and run" gravel is still settling and this run-off may have added to the TSS result.

A few factors that may have contributed to the higher than typical copper results include:

1. The need to improve the maintenance schedule of the bio-retention device. The influent and effluent of the device was measured; these results showed that the device had lost effectiveness. The mulch was tested for copper content and it showed a high copper

# **SCM Metal Products, Inc.**

Ms. Bethany A. Georgoulas

July 6, 2012

Page 2 of 3

content. A schedule will be put in place to test the mulch on a bi-monthly basis and perform effluent testing of the bio-retention device when possible.

2. Drainage of water from a cooling water pump seal.
3. The storm water monitoring plan will be updated and re-implemented. It is expected that areas that contribute copper and solids will be identified with the revised plan.

In accordance with the conditions of SCM's storm water permit, inspections were conducted within two weeks of receiving the sampling results. Additionally, sampling was performed on two subsequent measureable storm events.

One of the first actions taken after the receipt of the results was to inform all employees of the test results at the monthly safety meetings on May 24 and 25. In addition to sharing the results, the employees were reminded to review the storm water pollution prevention plan, renew their diligence in maintaining BMP's and suggest additional BMP's.

On May 30, 2012, an inspection of the storm water discharge areas was performed by Mr. James Whitacre, a Professional Engineer with Advanced Civil Design, Cary, NC and Mr. Gerard Reverri, SCM Metal Products. On June 1, 2012 an inspection of the facility was conducted by the SCM Storm Water Monitoring Plan sampling team. Potential source controls, operational controls and physical improvements were identified. Actions that should bring the TSS parameter to within the benchmark level and improve the copper level include:

1. The "floor tanks" used to store copper powder before the powder is used in SCM copper brazing paste process have been moved from outdoor storage to indoor storage.  
(Completed)
2. Replace mulch in bio-retention device. (Completed)
3. Implement a schedule to regularly measure the copper content of the mulch in the bio-retention device. (To be done.)
4. Improve the capture of pump seal water at the cooling tower cold water well pump.  
(Completed)
5. Revise the Storm Water Monitoring plan to reflect the changes in the storm water discharge layout. (To be done.)
6. Add gravel and stabilize any area where the existing gravel has been undercut by water.  
(To be done.)
7. Place a small sump in the last inlet before the drainage exits the gravel area on the east side of the building. This sump will act as a settling area for solids. (To be done.)
8. Adding an additional inlet on the east side of the Microbond Building to intercept the offsite water that is currently draining onto the property and causing some erosion in the gravel. (To be done.)
9. Install a scour hole to slow down the water flow into the woods and to help capture suspended solids before they are discharged into the existing ditch. (To be done.)
10. Install a permanent sediment riser at the end of the north swale at the existing pipe. Currently there is fence and aggregate stopping some of the sediment but a better long term solution would be a pipe riser wrapped in filter fabric. The filter fabric should be cleaned and/or replaced periodically as sediment accumulates. (To be done.)

# **SCM Metal Products, Inc.**

Ms. Bethany A. Georgoulias

July 6, 2012

Page 3 of 3

11. The 36" outfall pipe that the ditch and bio-retention area drain into will be hydro-jetted and cleaned out. After cleaning the pipe will be inspected by camera. (To be done.)
12. An investigation of plantings in the north swale will be conducted this summer and fall.

The parameter values obtained from the May 9 storm event are not the within results the expected by SCM. It is hoped that these results are an aberration and the subsequent sample results are indicative of the improvements that SCM has implemented. The values of the May 9 sampling have been addressed in accordance to the provisions of SCM's permit and we expect that the actions already taken and those to be done will further improve the quality of SCM's storm water discharge.

If you have any questions or comments please contact me.

Regards,

Gerard Reverri  
Engineer, SCM Metal Products, Inc.

Cc: Jill Spaulding, Plant Manager  
SCM Metal Products, Inc.

Enc.

## STORMWATER DISCHARGE OUTFALL (SDO)

## MONITORING REPORT

**RECEIVED**

Permit Number NCS NCS000050

SEP 11 2017

CENTRAL FILES  
DWR SECTIONFACILITY NAME SCM Metal Products, IncPERSON COLLECTING SAMPLE(S) Westley RisciliCERTIFIED LABORATORY(S) Pace Analytical Lab # 40

Lab # \_\_\_\_\_

SAMPLES COLLECTED DURING CALENDAR YEAR: 2017

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

COUNTY DurhamPHONE NO. (919) 544-8090SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.

## Part A: Specific Monitoring Requirements

Outfall No.	Date Sample Collected	50050						
		Total Flow (if app.)	Total Rainfall	Total Copper	Total Zinc	Total Suspended Solids	pH	
mo/dd/yr	MG	inches	(mg/l)	(mg/l)	(mg/l)		Standard Units	
1	8/23/17	NA	0.15	3.58	0.100	11.5	7.2	
2	8/23/17	NA	0.15	1.06	0.066	6.3	6.8	
3	8/23/17	NA	0.15	1.03	0.030	16.4	6.7	

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no  
 (if yes, complete Part B)

## Part B: Vehicle Maintenance Activity Monitoring Requirements

Outfall No.	Date Sample Collected	50050		00556		00530	00400	
		Total Flow (if applicable)	Total Rainfall	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	Total Suspended Solids	pH	New Motor Oil Usage
mo/dd/yr	MG	inches	mg/l		mg/l	unit	gal/mo	

**STORM EVENT CHARACTERISTICS:**Date 8/23/17Total Event Precipitation (inches): 0.15

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**

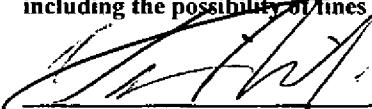
Division of Water Quality

Attn: Central Files

1617 Mail Service Center

Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."



(Signature of Permittee)

09/06/17

(Date)



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

*For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>*

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 1

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscill

Date of Inspection: 8/23/17

Time of Inspection: 15:40 pm

Total Event Precipitation (inches): 0.15"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 1 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe \_\_\_\_\_

Receiving Stream: Unnamed tributary to Northeast Creek \_\_\_\_\_

Describe the industrial activities that occur within the outfall drainage area: Copper powder production \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes

No →

A small amount of silt that has settled in the outfall device needs to be cleaned out.

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

*For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>*

Permit No.: N/C/5/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/ / / / / / / / /

Facility Name: SCM Metal Products, Inc. Outfall No. 2

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 8/23/17

Time of Inspection: 15:30 pm

Total Event Precipitation (inches): 0.15"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

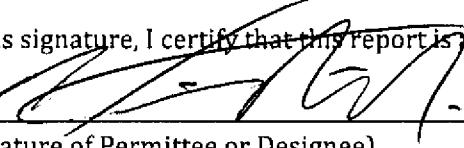
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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 2 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe into ditch \_\_\_\_\_

Receiving Stream: Unnamed tributary of Stirrup Iron Creek \_\_\_\_\_

Describe the industrial activities that occur within the outfall drainage area: Copper Powder Production \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

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**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

A small amount of sand and silt is present at the bottom of the ditch.

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/Q/ or Certificate of Coverage No.: N/C/G/\_\_\_/\_\_\_/\_\_\_/\_\_\_/\_\_\_/

Facility Name: SCM Metal Products, Inc. Outfall No. 3

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscill

Date of Inspection: 8/23/17

Time of Inspection: 15:15 pm

Total Event Precipitation (inches): 0.15"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

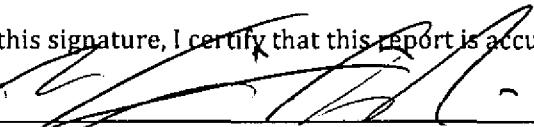
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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 3 Structure (pipe, ditch, etc.) Pipe into ditch.

Receiving Stream: Unnamed tributary of Stirrup Iron Creek.

Describe the industrial activities that occur within the outfall drainage area: Copper powder production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7. Is there any foam in the stormwater discharge?** Yes  No

**8. Is there an oil sheen in the stormwater discharge?** Yes  No

**9. Is there evidence of erosion or deposition at the outfall?** Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

Device has been cleaned. A replacement should be planned in the capital plan for 2018.

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.

September 06, 2017

Westley Riscili  
SCM Metal Products, Inc.  
2601 Weck Drive  
Research Triangle Pa, NC 27709



RE: Project: Outfalls #1, #2, #3  
Pace Project No.: 92352837

Dear Westley Riscili:

Enclosed are the analytical results for sample(s) received by the laboratory on August 23, 2017. The results relate only to the samples included in this report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Angela M. Baioni*

Angela Baioni  
angela.baioni@pacelabs.com  
(704)875-9092  
Project Manager

Enclosures

#### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

DEPARTMENT  
OF EDUCATION

## CERTIFICATIONS

Project: Outfalls #1, #2, #3

Pace Project No.: 92352837

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### Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

### Eden Certification IDs

205 East Meadow Road Suite A, Eden, NC 27288  
North Carolina Drinking Water Certification #: 37738

North Carolina Wastewater Certification #: 633  
Virginia/VELAP Certification #: 460025

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Outfalls #1, #2, #3  
 Pace Project No.: 92352837

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92352837001	Outfall #1	SM 2540D	CTB	1	PASI-E
		EPA 200.7	SER	2	PASI-A
92352837002	Outfall #2	SM 2540D	CTB	1	PASI-E
		EPA 200.7	SER	2	PASI-A
92352837003	Outfall #3	SM 2540D	CTB	1	PASI-E
		EPA 200.7	SER	2	PASI-A

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Outfalls #1, #2, #3  
Pace Project No.: 92352837

Sample: Outfall #1		Lab ID: 92352837001	Collected: 08/23/17 15:40	Received: 08/23/17 16:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	11.5	mg/L	2.5	1			08/25/17 12:09	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	3580	ug/L	5.0	1	08/29/17 16:10	09/04/17 20:04	7440-50-8	
Zinc	99.7	ug/L	10.0	1	08/29/17 16:10	09/04/17 20:04	7440-66-6	
Sample: Outfall #2		Lab ID: 92352837002	Collected: 08/23/17 15:30	Received: 08/23/17 16:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	6.3	mg/L	2.5	1			08/25/17 12:09	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	1060	ug/L	5.0	1	08/29/17 16:10	09/04/17 20:07	7440-50-8	
Zinc	65.7	ug/L	10.0	1	08/29/17 16:10	09/04/17 20:07	7440-66-6	
Sample: Outfall #3		Lab ID: 92352837003	Collected: 08/23/17 15:15	Received: 08/23/17 16:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	16.4	mg/L	3.6	1			08/25/17 12:13	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	1030	ug/L	5.0	1	08/29/17 16:10	09/04/17 20:31	7440-50-8	
Zinc	29.8	ug/L	10.0	1	08/29/17 16:10	09/04/17 20:31	7440-66-6	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Outfalls #1, #2, #3

Pace Project No.: 92352837

QC Batch:	375058	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	92352837001, 92352837002, 92352837003		

METHOD BLANK: 2077815 Matrix: Water

Associated Lab Samples: 92352837001, 92352837002, 92352837003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	2.5	08/25/17 11:47	

LABORATORY CONTROL SAMPLE: 2077816

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	250	258	103	90-110	

SAMPLE DUPLICATE: 2077817

Parameter	Units	Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	264	278	5	

SAMPLE DUPLICATE: 2077818

Parameter	Units	Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	525	570	8	D6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: Outfalls #1, #2, #3  
Pace Project No.: 92352837

QC Batch: 375423 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET  
Associated Lab Samples: 92352837001, 92352837002, 92352837003

METHOD BLANK: 2079682 Matrix: Water

Associated Lab Samples: 92352837001, 92352837002, 92352837003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	ND	5.0	09/05/17 13:31	
Zinc	ug/L	ND	10.0	09/05/17 13:31	

LABORATORY CONTROL SAMPLE: 2079683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	500	509	102	85-115	
Zinc	ug/L	500	506	101	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 2079684 2079685

Parameter	Units	92352497001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Copper	ug/L				516	498				4	
Zinc	ug/L				826	811				2	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 2079686 2079687

Parameter	Units	92352837002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Copper	ug/L	1060	500	500	1530	1520	95	93	70-130	1	
Zinc	ug/L	65.7	500	500	554	557	98	98	70-130	1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: Outfalls #1, #2, #3  
Pace Project No.: 92352837

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-E Pace Analytical Services - Eden

### ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Outfalls #1, #2, #3  
 Pace Project No.: 92352837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92352837001	Outfall #1	SM 2540D	375058		
92352837002	Outfall #2	SM 2540D	375058		
92352837003	Outfall #3	SM 2540D	375058		
92352837001	Outfall #1	EPA 200.7	375423	EPA 200.7	375756
92352837002	Outfall #2	EPA 200.7	375423	EPA 200.7	375756
92352837003	Outfall #3	EPA 200.7	375423	EPA 200.7	375756

### REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: August 4, 2017 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.04	Issuing Authority: Pace Quality Office

**Laboratory receiving samples:**

 Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville 

 Sample Condition  
Upon Receipt

Client Name:

Project #:

WO# : 92352837



92352837

 Courier:  
 Commercial       FedEx     UPS     USPS     Client  
 Pace                 Other: \_\_\_\_\_

 Custody Seal Present?  Yes  No      Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 8/23/17

 Packing Material:  Bubble Wrap     Bubble Bags     None     Other    Biological Tissue Frozen?  
 Thermometer:       Wet     Blue     None       Yes     No     N/A

 IR Gun ID: 153492      Correction Factor: Cooler Temp Corrected (°C): -0.1      Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

 USDA Regulated Soil ( Yes, water sample)

 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No      Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Samples Arrived within Hold Time?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Correct Containers Used? -Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
-Includes Date/Time/ID/Analysis Matrix:	SW		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

**CLIENT NOTIFICATION/RESOLUTION**

 Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

 Comments/Sample Discrepancy: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Lot ID of split containers: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: 8-24-17

Project Manager SRF Review: \_\_\_\_\_

Date: 8-25-17

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

	Document Name: F-CAR-CS33-Rev.04	Document Revised: August 14, 2017 Page 2 of 2
Pace Analytical	Sample Condition Upon Receipt(SICUR)	Project #
	Document No.: F-CAR-CS33-Rev.04	Pace Quality Office
		Issuing Authority:
		Pace Quality Office
		W0# : 92352837
		PM: AMB Due Date: 09/01/17
		CLIENT: 91-SCH Metal

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

\*\*Bottom half of box is to list number of bottles

pH Adjustment Log for Preserved Samples					
Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added
Lot #					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)
	BP3U-250 mL Plastic Unpreserved (N/A)
	BP2U-500 mL Plastic Unpreserved (N/A)
1	BP1U-1 liter Plastic Unpreserved (N/A)
2	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)
3	BP3N-250 mL plastic HNO3 (pH < 2)
4	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)
5	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)
6	WGFU-Wide-mouthed Glass jar Unpreserved
7	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)
8	AG3H-1 liter Amber HCl (pH < 2)
9	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)
10	AG1S-1 liter Amber H2SO4 (pH < 2)
11	AG3S-250 mL Amber H2SO4 (pH < 2)
12	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)
13	DG9H-40 mL VOA HCl (N/A)
14	VG9T-40 mL VOA Na2S2O3 (N/A)
15	VG9U-40 mL VOA Unp (N/A)
16	DG9P-40 mL VOA H3PO4 (N/A)
17	VOAK (6 vials per kit)-5035 kit (N/A)
18	V/GK (3 vials per kit)-VPH/Gas kit (N/A)
19	SPST-125 mL Sterile Plastic (N/A - lab)
20	SPZT-250 mL Sterile Plastic (N/A - lab)
21	BP3A-250 mL Plastic (NH4)2SO4 (9.3-9.7)
22	Cubitainer
23	VSGU-20 mL Scintillation vials (N/A)
24	GN


**Pace Analytical™**  
[www.pacelabs.com](http://www.pacelabs.com)

8701 Conference Drive, Raleigh, NC 27607  
 ph: (919) 834-4984, fax: (919) 834-6497  
 NCWW Cert#87, NCDW Cert#37731

# Chain of Custody

 W.O. # 92350-837

Report Results To:

Bill To:

SAMECompany: SCM Metal Products, Inc.

Project Reference: \_\_\_\_\_

Address: 2601 Week Drive

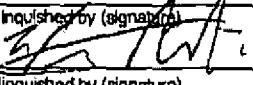
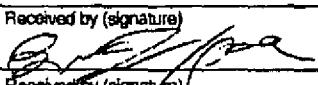
Project Number: \_\_\_\_\_

RTP, NC 27709Purchase Order #: P000 12979Attn: Westley Rixili Standard Report DeliveryPhone: 919-287-9891 Rush Report Delivery (w/surcharge)\*Rush projects are subject to prior approval by  
the laboratoryFax: 919-544-8332

Requested Due Date: \_\_\_\_\_

Sampled by (signature): \_\_\_\_\_

Outfall #1 pH 7.2 2 Bottles	G	8/23 15:20	SW	Total Copper, Total Zinc, TSS	001
Outfall #2 pH 6.8 2 Bottles	G	8/23 15:30	SW	Total Copper, Total Zinc, TSS	002
Outfall #3 pH 6.7 2 Bottles	G	8/23 15:15	SW	Total Copper, Total Zinc, TSS	003

Relinquished by (signature) 	Received by (signature) 	Date 8/23/07	Time 16:45
Relinquished by (signature)	Received by (signature)	Date	Time
Relinquished by (signature)	Received by (signature)	Date	Time

 Receipt Conditions (Lab Use)  
 4±2°C  Temp: 19  
 Res. Chlorine:  
 Absent  Present  
 Add preserv. <2%  
 Yes  No  n/a  
 Base preserv. >12%  
 Yes  No  n/a

**STORMWATER DISCHARGE OUTFALL (SDO)**  
**MONITORING REPORT**  
**RECEIVED**

Permit Number NCS NCS000050

MAR 22 2017

CENTRAL FILES  
DWR SECTION

FACILITY NAME SCM Metal Products, Inc

PERSON COLLECTING SAMPLE(S) Westley Riscili

CERTIFIED LABORATORY(S) Pace Analytical Lab # 40

Lab # \_\_\_\_\_

SAMPLES COLLECTED DURING CALENDAR YEAR: 2016

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

COUNTY Durham

PHONE NO. (919) 544-8090

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050						
		Total Flow (if app.)	Total Rainfall	Total Copper	Total Zinc	Total Suspended Solids	pH	
	mo/dd/yr	MG	inches	(mg/l)	(mg/l)	(mg/l)	Standard Units	
1	3/13/17	NA	0.80	2.62	0.346	6.8	7.8	
2	3/13/17	NA	0.80	1.22	0.069	15.1	7.2	
3	3/13/17	NA	0.80	1.04	0.039	ND	8.2	

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no  
 (if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

Outfall No.	Date Sample Collected	50050		00556		00530	00400	
		Total Flow (if applicable)	Total Rainfall	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	Total Suspended Solids	pH	New Motor Oil Usage
	mo/dd/yr	MG	inches	mg/l		mg/l	unit	gal/mo

**STORM EVENT CHARACTERISTICS:**Date 3/13/17Total Event Precipitation (inches): 0.80

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**

Division of Water Quality

Attn: Central Files

1617 Mail Service Center

Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."



---

(Signature of Permittee)

---

(Date)



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 1

County: Durham \_\_\_\_\_ Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 3/13/17

Time of Inspection: 14:28 pm

Total Event Precipitation (inches): 0.80"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 1 Structure (pipe, ditch, etc.) Pipe

Receiving Stream: Unnamed tributary to Northeast Creek.

Describe the industrial activities that occur within the outfall drainage area: Copper powder production

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5      Primarily silt.

**7.** Is there any **foam** in the stormwater discharge?      Yes       No

**8.** Is there an **oil sheen** in the stormwater discharge?      Yes       No

**9.** Is there evidence of **erosion or deposition** at the outfall?      Yes       No

**10. Other Obvious Indicators of Stormwater Pollution:**

The weir could be cleaned out, there is a small amount of silt that has settled in the outfall device.

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 2

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 3/13/17

Time of Inspection: 14:20 pm

Total Event Precipitation (inches): 0.80"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

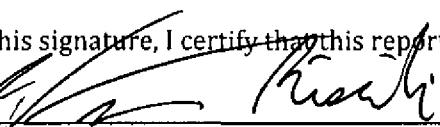
*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 2 Structure (pipe, ditch, etc.) Pipe into ditch.

Receiving Stream: Unnamed tributary of Stirrup Iron Creek.

Describe the industrial activities that occur within the outfall drainage area: Copper Powder Production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

Primarily leaves and pine needles.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7. Is there any foam in the stormwater discharge?** Yes  No

**8. Is there an oil sheen in the stormwater discharge?** Yes  No

**9. Is there evidence of erosion or deposition at the outfall?** Yes  No

A small amount of sand and silt is present at the bottom of the ditch.

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_\_\_/\_\_\_/\_\_\_/\_\_\_/\_\_\_/

Facility Name: SCM Metal Products, Inc. Outfall No. 3

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 3/13/17

Time of Inspection: 14:10 pm

Total Event Precipitation (inches): 0.80"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

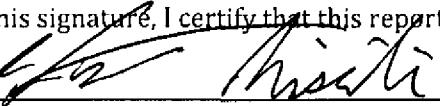
*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 3 Structure (pipe, ditch, etc.) Pipe into ditch.

Receiving Stream: Unnamed tributary of Stirrup Iron Creek.

Describe the industrial activities that occur within the outfall drainage area: Copper powder production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

Device should be cleaned out, I have asked for a quote.

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.

March 20, 2017

Westley Riscili  
SCM Metal Products, Inc.  
2601 Weck Drive  
Research Triangle Pa, NC 27709



RE: Project: OUTFALL #1/#2/#3  
Pace Project No.: 92333171

Dear Westley Riscili:

Enclosed are the analytical results for sample(s) received by the laboratory on March 13, 2017. The results relate only to the samples included in this report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Angela M. Baioni*

Angela Baioni  
angela.baioni@pacelabs.com  
(704)875-9092  
Project Manager

Enclosures

#### REPORT OF LABORATORY ANALYSIS

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©AVIATION

## CERTIFICATIONS

Project: OUTFALL #1/#2/#3

Pace Project No.: 92333171

---

### Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### Eden Certification IDs

205 East Meadow Road Suite A, Eden, NC 27288  
North Carolina Drinking Water Certification #: 37738

North Carolina Wastewater Certification #: 633  
Virginia/VELAP Certification #: 460025

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: OUTFALL #1/#2/#3  
 Pace Project No.: 92333171

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92333171001	OUTFALL #1	SM 2540D	CHM	1	PASI-E
		EPA 200.7	SH1	2	PASI-A
92333171002	OUTFALL #2	SM 2540D	CHM	1	PASI-E
		EPA 200.7	SH1	2	PASI-A
92333171003	OUTFALL #3	SM 2540D	CHM	1	PASI-E
		EPA 200.7	SH1	2	PASI-A

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: OUTFALL #1/#2/#3

Pace Project No.: 92333171

Sample: OUTFALL #1	Lab ID: 92333171001	Collected: 03/13/17 14:28	Received: 03/13/17 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	6.8	mg/L	2.5	1			03/16/17 12:53	
<b>Field Data Raleigh</b>	Analytical Method:							
Collected By	WR			1			03/13/17 14:28	
Field pH	7.8	Std. Units	0.10	1			03/13/17 14:28	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	2620	ug/L	5.0	1	03/15/17 20:20	03/16/17 19:33	7440-50-8	
Zinc	346	ug/L	10.0	1	03/15/17 20:20	03/16/17 19:33	7440-66-6	
<b>Sample: OUTFALL #2</b>	Lab ID: 92333171002	Collected: 03/13/17 14:20	Received: 03/13/17 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	15.1	mg/L	2.8	1			03/16/17 12:53	
<b>Field Data Raleigh</b>	Analytical Method:							
Collected By	WR			1			03/13/17 14:20	
Field pH	7.2	Std. Units	0.10	1			03/13/17 14:20	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	1220	ug/L	5.0	1	03/15/17 20:20	03/16/17 19:36	7440-50-8	
Zinc	69.1	ug/L	10.0	1	03/15/17 20:20	03/16/17 19:36	7440-66-6	
<b>Sample: OUTFALL #3</b>	Lab ID: 92333171003	Collected: 03/13/17 14:10	Received: 03/13/17 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	ND	mg/L	2.6	1			03/16/17 12:54	
<b>Field Data Raleigh</b>	Analytical Method:							
Collected By	WR			1			03/13/17 14:10	
Field pH	8.2	Std. Units	0.10	1			03/13/17 14:10	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	1040	ug/L	5.0	1	03/15/17 20:20	03/16/17 19:40	7440-50-8	
Zinc	38.7	ug/L	10.0	1	03/15/17 20:20	03/16/17 19:40	7440-66-6	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: OUTFALL #1/#2/#3

Pace Project No.: 92333171

QC Batch:	352462	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples: 92333171001, 92333171002, 92333171003			

METHOD BLANK: 1955266 Matrix: Water

Associated Lab Samples: 92333171001, 92333171002, 92333171003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	2.5	03/16/17 12:50	

LABORATORY CONTROL SAMPLE: 1955267

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	250	246	98	90-110	

SAMPLE DUPLICATE: 1955268

Parameter	Units	Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	263	270	2	

SAMPLE DUPLICATE: 1956396

Parameter	Units	Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	97.8	106	8 D6	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: OUTFALL #1/#2/#3

Pace Project No.: 92333171

QC Batch:	352154	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 MET
Associated Lab Samples: 92333171001, 92333171002, 92333171003			

METHOD BLANK: 1953690 Matrix: Water

Associated Lab Samples: 92333171001, 92333171002, 92333171003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	ND	5.0	03/16/17 18:59	
Zinc	ug/L	ND	10.0	03/16/17 18:59	

LABORATORY CONTROL SAMPLE: 1953691

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	500	426	86	85-115	
Zinc	ug/L	500	428	86	85-115	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1953692 1953693

Parameter	Units	92333166002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
			Spike Conc.	Spike Conc.							
Copper	ug/L	22.9	500	500	489	506	93	97	70-130	3	
Zinc	ug/L	295	500	500	754	778	92	97	70-130	3	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1953694 1953695

Parameter	Units	92333193002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
			Spike Conc.	Spike Conc.							
Copper	ug/L	ND	500	500	439	435	88	87	70-130	1	
Zinc	ug/L	ND	500	500	443	439	89	88	70-130	1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: OUTFALL #1/#2/#3

Pace Project No.: 92333171

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

PASI-E Pace Analytical Services - Eden

### ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: OUTFALL #1/#2/#3  
 Pace Project No.: 92333171

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92333171001	OUTFALL #1	SM 2540D	352462		
92333171002	OUTFALL #2	SM 2540D	352462		
92333171003	OUTFALL #3	SM 2540D	352462		
92333171001	OUTFALL #1				
92333171002	OUTFALL #2				
92333171003	OUTFALL #3				
92333171001	OUTFALL #1	EPA 200.7	352154	EPA 200.7	352355
92333171002	OUTFALL #2	EPA 200.7	352154	EPA 200.7	352355
92333171003	OUTFALL #3	EPA 200.7	352154	EPA 200.7	352355

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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Document Name: ESI Tech Spec  
 Sample Condition Upon Receipt (SCUR)  
 Document No.: F-CAR-QA-003-Rev.02

Document Revised: Sept. 21, 2016  
 Page 1 of 2  
 Issuing Authority:  
 Pace Quality Office

Laboratory receiving samples:

Asheville

Eden

Greenwood

Huntersville

Raleigh

Mechanicsville

Sample Condition Upon Receipt

Client Name:

*SCM Metal Products*

Project #:

WO# : 92333171



92333171

Courier:  FedEx  UPS  USPS  Client  
 Commercial  Pace  Other \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer:  IR Gun ID: *T5-3492* Date/Initials Person Examining Contents: *BT 3-13-17*

Correction Factor: *Add 0.6* Cooler Temp Corrected (°C): *S.3* Biological Tissue Frozen?  Yes  No  N/A

Temp should be above freezing to 5°C

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

	Comments/Discrepancy:		
Chain of Custody Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 3.
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> 4.
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 5.
Correct Containers Used? -Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 6.
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 7.
Samples Field Filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> 8. Note if sediment is visible in the dissolved container
Sample Labels Match CDC? -Includes Date/Time/ID/Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 9.
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 10.
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 11.
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A

CLIENT NOTIFICATION/RESOLUTION

Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Comments/Sample Discrepancy:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Manager SCURF  
 Review: \_\_\_\_\_

*AMB*

Date: *3-14-17*

Project Manager SRF  
 Review: \_\_\_\_\_

*AMB*

Date: *3-14-17*

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, Incorrect preservative, out of temp, Incorrect containers)

*Pace Analytical*

Sample Condition Upon Receipt (SCUR) \_\_\_\_\_  
Document No.: \_\_\_\_\_  
F-CAR-QA-003-Rev.02

Page 2 of 2  
Issuing Authority:  
Pace Quality Office

**WO# :92333171**

PM: AMB Due Date: 03/22/17  
CLIENT: 91-SCH Metal

- \*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
- \*\*Bottom half of box is to list number of bottles

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	pH Adjustment Log for Preserved Samples		Project #
				Time preservation adjusted	Amount of Preservative added	
1						BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)
2						BP3U-250 mL Plastic Unpreserved (N/A)
3						BP2U-500 mL Plastic Unpreserved (N/A)
4						BP1U-1 liter Plastic Unpreserved (N/A)
5						BP3S-250 mL Plastic H2SO4 (pH < 2) (Cl-)
6						BP3N-250 mL plastic HNO3 (pH < 2)
7						BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)
8						BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)
9						WGFU-Wide-mouthed Glass jar Unpreserved
10						AG1U-1 liter Amber Unpreserved (N/A) (Cl-)
11						AG1M-1 liter Amber HCl (pH < 2)
12						AG3U-250 mL Amber Unpreserved (N/A) (Cl-)
						AG1S-1 liter Amber H2SO4 (pH < 2)
						AG3S-250 mL Amber H2SO4 (pH < 2)
						AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)
						DG9H-40 mL VOA HCl (N/A)
						VG9T-40 mL VOA Na2S2O3 (N/A)
						VG9U-40 mL VOA Unp (N/A)
						DG9P-40 mL VOA H3PO4 (N/A)
						VOAK (6 vials per kit)-SO35 kit (N/A)
						V/GK (3 vials per kit)-VPH/Gas kit (N/A)
						SPST-125 mL Sterile Plastic (N/A - lab)
						SP2T-250 mL Sterile Plastic (N/A - lab)
						BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)
						Cubitainer
						VSGU-20 mL Scintillation vials (N/A)
						GN



6701 Conference Drive, Raleigh, NC 27607  
ph: (919) 834-4984, fax: (919) 834-6497  
NCWW Cert#67, NCDW Cert#37731

# Chain of Custody

W.O. # 92333(7)

Report Results To:

Company: Scm Metal Products, Inc.

Bill To:

SAME

Address: 2601 Week Drive

RTP, NC 27709

Attn: Westley R. S.G.L.

Phone: 919-287-9891

Fax: 919-544-8338

Sampled by (signature): [Signature]

Project Reference: \_\_\_\_\_

Project Number: 4

Purchase Order #: P0011592

Standard Report Delivery

Rush Report Delivery (w/surcharge)

"Rush projects are subject to prior approval by  
the laboratory

Requested Due Date: \_\_\_\_\_

Outfall #1 pH = 7.8 2 bottles	G	3-13-17 14:28	SW	Total Copper, Total Zinc, TSS	001
Outfall #2 pH = 7.2 2 bottles	G	3-13-17 14:20	SW	Total Copper, Total Zinc, TSS	002
Outfall #3 pH = 8.2 2 bottles	G	3-13-17 14:10	SW	Total Copper, Total Zinc, TSS	003

Relinquished by (signature) <u>[Signature]</u>	Received by (signature) <u>[Signature]</u>	Date 3-13-17	Time 1640
Relinquished by (signature)	Received by (signature)	Date	Time
Relinquished by (signature)	Received by (signature)	Date	Time

Receipt Conditions (Lab Use Only)

4±2°C  Temp: 53 °C

Res. Chlorine:

Absent  Present  n/a

Acid preserv. <2?

Yes  No  n/a

Base preserv. >12?

Yes  No  n/a

RECEIVED

JUN 20 2016

CENTRAL FILES  
DWR SECTION



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/S/0/0/0/0/5/Q/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 1

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 5/13/16

Time of Inspection: 8:27 am

Total Event Precipitation (inches): 0.50"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 1 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe \_\_\_\_\_

Receiving Stream: Unnamed tributary to Northeast Creek.

Describe the industrial activities that occur within the outfall drainage area: Copper powder production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Darker brown, believed to be caused by work on the bio-retention device in which mulch and soil were replaced.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      **2**      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      **2**      3      4      5      Primarily silt.

**7.** Is there any **foam** in the stormwater discharge? Yes  No

There is a small amount of silt in the weir. Although the weir was cleaned, other projects such as the replacement of mulch and soil in the bio-retention device, as well as efforts to reduce erosion in the swale draining into this outfall have occurred.

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No  →

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

*For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>*

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 2

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 5/13/16

Time of Inspection: 08:10 am

Total Event Precipitation (inches): 0.50"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 2 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe into ditch \_\_\_\_\_

Receiving Stream: Unnamed tributary of Stirrup Iron Creek.

Describe the industrial activities that occur within the outfall drainage area: Copper Powder Production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

A small amount of sand and silt is present at the bottom of the ditch.

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 3

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 5/13/16

Time of Inspection: 8:00 am

Total Event Precipitation (inches): 0.50"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

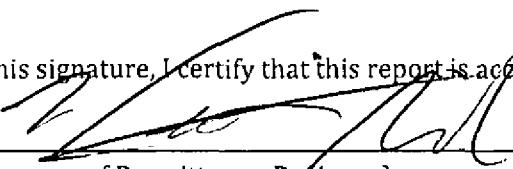
*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 3 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe into ditch \_\_\_\_\_

Receiving Stream: Unnamed tributary of Stirrup Iron Creek \_\_\_\_\_

Describe the industrial activities that occur within the outfall drainage area: Copper powder production \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.

Silt is beginning to build up, and the source has been identified. Quotes are being taken for the work to be done.

## ANALYTICAL RESULTS

Project: Outfall Sampling  
 Pace Project No.: 92297570

Sample: Outfall #1	Lab ID: 92297570001	Collected: 05/13/16 08:27	Received: 05/13/16 09:33	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	1340	ug/L	5.0	1	05/16/16 18:00	05/17/16 19:07	7440-50-8	
Zinc	152	ug/L	10.0	1	05/16/16 18:00	05/17/16 19:07	7440-66-6	
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	12.3	mg/L	6.2	1		05/16/16 13:37		
Sample: Outfall #2	Lab ID: 92297570002	Collected: 05/13/16 08:10	Received: 05/13/16 09:33	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	963	ug/L	5.0	1	05/16/16 18:00	05/17/16 19:11	7440-50-8	
Zinc	61.6	ug/L	10.0	1	05/16/16 18:00	05/17/16 19:11	7440-66-6	
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	3.0	mg/L	2.5	1		05/16/16 13:37		
Sample: Outfall #3	Lab ID: 92297570003	Collected: 05/13/16 08:00	Received: 05/13/16 09:33	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	890	ug/L	5.0	1	05/16/16 18:00	05/17/16 19:19	7440-50-8	
Zinc	24.1	ug/L	10.0	1	05/16/16 18:00	05/17/16 19:19	7440-66-6	
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	5.0	mg/L	2.8	1		05/16/16 13:38		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Outfall Sampling  
Pace Project No.: 92297570

QC Batch:	MPRP/21723	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 MET
Associated Lab Samples: 92297570001, 92297570002, 92297570003			

METHOD BLANK: 1734369 Matrix: Water

Associated Lab Samples: 92297570001, 92297570002, 92297570003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	ND	5.0	05/17/16 18:09	
Zinc	ug/L	ND	10.0	05/18/16 21:36	

LABORATORY CONTROL SAMPLE: 1734370

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	500	474	95	85-115	
Zinc	ug/L	500	454	91	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1734371 1734372

Parameter	Units	92297499007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
			500	500	468	486	94	97	70-130	4	
Copper	ug/L	ND	500	500	468	486	94	97	70-130	4	
Zinc	ug/L	11.6	500	500	441	460	86	90	70-130	4	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1734373 1734374

Parameter	Units	92297570002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
			500	500	1370	1380	81	83	70-130	1	
Copper	ug/L	963	500	500	1370	1380	81	83	70-130	1	
Zinc	ug/L	61.6	500	500	493	499	86	87	70-130	1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Outfall Sampling  
 Pace Project No.: 92297570

QC Batch: WET/44943	Analysis Method: SM 2540D
QC Batch Method: SM 2540D	Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 92297570001, 92297570002, 92297570003	

METHOD BLANK: 1734511                          Matrix: Water  
 Associated Lab Samples: 92297570001, 92297570002, 92297570003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	2.5	05/16/16 13:30	

LABORATORY CONTROL SAMPLE: 1734512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	250	252	101	90-110	

SAMPLE DUPLICATE: 1734513

Parameter	Units	Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	92297498003 10	9.8	2	

SAMPLE DUPLICATE: 1734514

Parameter	Units	Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	92297499007 6.2	5.8	7 D6	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Outfall Sampling

Pace Project No.: 92297570

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville

### ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Outfall Sampling  
 Pace Project No.: 92297570

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92297570001	Outfall #1	EPA 200.7	MPRP/21723	EPA 200.7	ICP/19497
92297570002	Outfall #2	EPA 200.7	MPRP/21723	EPA 200.7	ICP/19497
92297570003	Outfall #3	EPA 200.7	MPRP/21723	EPA 200.7	ICP/19497
92297570001	Outfall #1	SM 2540D		WET/44943	
92297570002	Outfall #2	SM 2540D		WET/44943	
92297570003	Outfall #3	SM 2540D		WET/44943	

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
Sample Condition Upon Receipt(SCUR)  
Document No.:  
F-RAL-CS-001-rev.05

Document Revised: 26Feb2016  
Page 1 of 2  
Issuing Authority:  
Pace Raleigh Quality Office

WO# : 92297570



Sample Condition Upon  
Receipt

Client Name:

SCM Metals

P

Courier:  Fed Ex  UPS  USPS  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: MAPS 13/16

Packing Material:  Bubble Wrap  Bubble Bags  None  Other: \_\_\_\_\_

Thermometer:  IR SN: 122065387  IR SN: 122065371 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Correction Factor: 0.0°C Cooler Temp Corrected ('C): 14.2 Biological Tissue Frozen?  Yes  No  N/A

Temp should be above freezing to 6°C

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

**COMMENTS:**

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WA</u>		
All containers needing acid/base preservation have been checked?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
(HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples checked for dechlorination	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

**CLIENT NOTIFICATION/RESOLUTION**

Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Comments/Resolution: \_\_\_\_\_

Project Manager SCUR Review: AMB

Date: 5-13-16

Project Manager SRF Review: LH

Date: 05/13/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, Incorrect preservative, out of temp, Incorrect containers)



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: <u>178721</u> of _____
Company: <u>SCM Metal Products</u> Address: <u>2601 Wedge Drive</u> <u>RTP, NC 27709</u> Email To: <u>wciscilie@scm-metals.com</u> Phone: <u>919-287-9891</u> Fax: <u>919-544-8332</u>		Report To: <u>Westley R. Scilie</u> Copy To: _____ Purchase Order No.: <u>P000</u> Project Name: _____ Project Number: _____		Attention: <u>Susan Munda</u> Company Name: <u>SCM Metal Products</u> Address: <u>CAMP</u> Phone Quote Reference: _____ Pace Project Manager: _____ Pace Profile #: <u>5681-2</u>		REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <u>Storage tank</u>
Requested Due Date/TAT:						Site Location: _____ State: _____

ITEM #	Section D Required Client Information		Matrix Codes		COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	Pace Project No./Lab I.D.					
	MATRIX CODE		MATRIX CODE (use valid codes in both)		COMPOSITE START				COMPOSITE END/GRAB			HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	HCl	NaOH			Na <sub>2</sub> SO <sub>4</sub>	Methanol	Other	Y	N
	SAMPLE ID (A-Z, 0-9, -) Sample IDs MUST BE UNIQUE		SAMPLE TYPE (G=GRAB C=COMP)		DATE	TIME			DATE	TIME												
1	Outfall #1 pH 7.8	WT	G			5-13-16	08:27	2	1	1						✓	✓	✓	N	001		
2	Outfall #2 pH 7.41	WT	G			5-13-16	08:10	2	1	1						✓	✓	✓	N	002		
3	Outfall #3 pH 7.5	WT	G			5-13-16	08:30	2	1	1						✓	✓	✓	N	003		
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
ADDITIONAL COMMENTS			REMINISCHED BY / AFFILIATION			DATE	TIME	ACCEPTED BY / AFFILIATION			DATE	TIME	SAMPLE CONDITIONS									
<u>Westley R. Scilie</u>						5-13-16		<u>Westley R. Scilie</u>			5-13-16	09:33	17.2	Y	N	Y						

ORIGINAL				SAMPLER NAME AND SIGNATURE				Temp in °C
PRINT Name of SAMPLER:								Received on Site (Y/N)
SIGNATURE of SAMPLER:				DATE Signed (MM/DD/YYYY):				Custody Seal/Coder (Y/N)
								Sample intact (Y/N)

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

**Permit Number NCS NCS000050**

**SAMPLES COLLECTED DURING CALENDAR YEAR: 2016**

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

**FACILITY NAME** SCM Metal Products, Inc

**COUNTY** Durham

**PERSON COLLECTING SAMPLE(S)** Westley Riscili

**PHONE NO.** (919) 544-8090

**CERTIFIED LABORATORY(S)** Pace Analytical

**Lab #** 40

**Lab #**

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Rainfall	Total Copper	Total Zinc	Total Suspended Solids	pH	RECEIVED OCT 14 2016
		Total Flow (if app.)						
1	09/27/16	NA	1.30	1.39	0.117	2.7	7.1	CENTRAL FILES DWR SECTION
2	09/27/16	NA	1.30	1.22	0.046	ND	7.3	
3	09/27/16	NA	1.30	0.598	0.020	5.1	7.8	

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month?  yes  no  
(if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Rainfall	00556	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	00530	00400	New Motor Oil Usage
		Total Flow (if applicable)		Oil & Grease (if appl.)		Total Suspended Solids	pH	
	mo/dd/yr	MG	inches	mg/l		mg/l	unit	gal/mo

**STORM EVENT CHARACTERISTICS:**Date 9/27/16Total Event Precipitation (inches): 1.30

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**

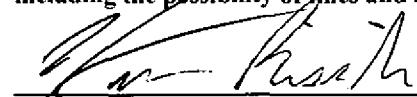
Division of Water Quality

Attn: Central Files

1617 Mail Service Center

Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

  
(Signature of Permittee)10-6-16

(Date)



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/S/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 1

County: Durham \_\_\_\_\_ Phone No. 919-544-8090 \_\_\_\_\_

Inspector: Westley Riscili \_\_\_\_\_

Date of Inspection: 9/27/16 \_\_\_\_\_

Time of Inspection: 11:45 am \_\_\_\_\_

Total Event Precipitation (inches): 1.30" \_\_\_\_\_

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

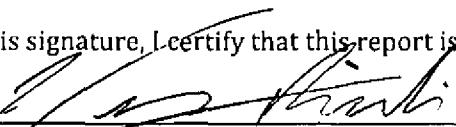
*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 1 Structure (pipe, ditch, etc.) Pipe.

Receiving Stream: Unnamed tributary to Northeast Creek.

Describe the industrial activities that occur within the outfall drainage area: Copper powder production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5      Primarily silt.

**7. Is there any foam in the stormwater discharge?** Yes  No

There is a small amount of silt in the weir. Although the weir was cleaned, other projects such as the replacement of mulch and soil in the bio-retention device, as well as efforts to reduce erosion in the swale draining into this outfall have occurred.

**8. Is there an oil sheen in the stormwater discharge?** Yes  No

**9. Is there evidence of erosion or deposition at the outfall?** Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_  
Facility Name: SCM Metal Products, Inc. Outfall No. 2

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 9/27/16

Time of Inspection: 11:58 am

Total Event Precipitation (inches): 1.30"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

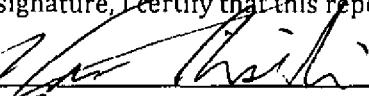
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A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 2 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe into ditch. \_\_\_\_\_

Receiving Stream: Unnamed tributary of Stirrup Iron Creek. \_\_\_\_\_

Describe the industrial activities that occur within the outfall drainage area: Copper Powder Production. \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear. \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None. \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5      Primarily leaves and pine needles.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0 or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 3

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 9/27/16

Time of Inspection: 12:16 pm

Total Event Precipitation (inches): 1.30"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

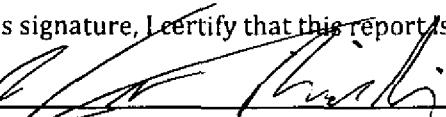
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A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 3 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe into ditch. \_\_\_\_\_

Receiving Stream: Unnamed tributary of Stirrup Iron Creek. \_\_\_\_\_

Describe the industrial activities that occur within the outfall drainage area: Copper powder production. \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear. \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None. \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes  No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes  No

**9.** Is there evidence of **erosion or deposition** at the outfall? Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.

Silt is beginning to build up,  
and the source has been  
identified. Quotes are being  
taken for the work to be  
done. – Capital 2017.

## ANALYTICAL RESULTS

Project: OUTFALL SAMPLING  
Pace Project No.: 92313809

Sample: OUTFALL#1 PH 7.1 Lab ID: 92313809001 Collected: 09/27/16 11:45 Received: 09/27/16 13:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	2.7	mg/L	2.5	1			09/29/16 13:07	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	1390	ug/L	5.0	1	09/30/16 22:05	10/01/16 11:30	7440-50-8	
Zinc	117	ug/L	10.0	1	09/30/16 22:05	10/01/16 11:30	7440-66-6	

Sample: OUTFALL#2 PH 7.3 Lab ID: 92313809002 Collected: 09/27/16 11:58 Received: 09/27/16 13:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	ND	mg/L	3.0	1			09/29/16 13:08	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	1220	ug/L	5.0	1	09/30/16 22:05	10/01/16 11:33	7440-50-8	
Zinc	46.3	ug/L	10.0	1	09/30/16 22:05	10/01/16 11:33	7440-66-6	

Sample: OUTFALL#3 PH 7.8 Lab ID: 92313809003 Collected: 09/27/16 12:16 Received: 09/27/16 13:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	5.1	mg/L	2.9	1			09/29/16 13:09	
<b>200.7 MET ICP</b>	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Copper	598	ug/L	5.0	1	09/30/16 22:05	10/01/16 11:36	7440-50-8	
Zinc	20.1	ug/L	10.0	1	09/30/16 22:05	10/01/16 11:36	7440-66-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

Permit Number NCS NCS000050

**SAMPLES COLLECTED DURING CALENDAR YEAR: 2016**

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

**FACILITY NAME** SCM Metal Products, Inc  
**PERSON COLLECTING SAMPLE(S)** Westley Riscili  
**CERTIFIED LABORATORY(S)** Pace Analytical Lab # 40  
Lab # \_\_\_\_\_

**COUNTY** Durham  
**PHONE NO.** (919) 544-8090

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050						
		Total Flow (if app.)	Total Rainfall	Total Copper	Total Zinc	Total Suspended Solids	pH	Standard Units
1	5/13/16	NA	0.50	1.34	0.152	12.3	7.8	
2	5/13/16	NA	0.50	0.963	0.062	3.0	7.4	
3	5/13/16	NA	0.50	0.890	0.024	5.0	7.5	
								RECEIVED
								JUN 20 2016
								CENTRAL FILES
								DWR SECTION

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no  
(if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

Outfall No.	Date Sample Collected	50050		00556		00530	00400	
		Total Flow (if applicable)	Total Rainfall	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	Total Suspended Solids	pH	New Motor Oil Usage

**STORM EVENT CHARACTERISTICS:**Date 5/13/16Total Event Precipitation (inches): 0.50

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

**Mail Original and one copy to:**  
Division of Water Quality  
Attn: Central Files  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

  
(Signature of Permittee)6-15-16  
(Date)

**SCM Metal Products, Inc.**

2016

October 6, 2016

RECEIVED

OCT 11 2016

DENR-LAND QUALITY  
STORMWATER PERMITTING

SW Individual Permit Coverage Renewal  
Stormwater Permitting Program  
1612 Mail Service Center  
Raleigh, NC 27699-1612

**FILE COPY**

Certified Mail # 7004 1350 0002 8891 7995

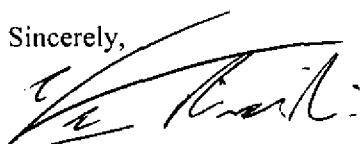
To Whom It May Concern:

I previously submitted a permit renewal form for SCM Metal Products, Inc., permit No. NCS000050. At the time of the submission, SCM Metals did not have the analytical monitoring results, or visual monitoring results for period 2 of year 5 completed. Therefore, these results for period 2 of year 5 were not included in the prior submission.

I have since obtained these results and would like to submit the completed summary of analytical results and visual monitoring for period 2 of year 5, as stated in permit NCS000050. I have enclosed a completed summary of analytical monitoring results, as well as a completed summary of visual monitoring results for the said period.

If you have any questions or require additional information, please contact me at [wriscili@scmmetals.com](mailto:wriscili@scmmetals.com), and I can also be reached direct at (919) 287-9891.

Sincerely,



Westley Riscili

Enclosures: Summary of Analytical Monitoring Results, Summary of Visual Monitoring Results

# SCM Metal Products, Inc.

## Summary of Visual Monitoring Results

NCS000050

Date: 05/09/12			Total Rainfall (inches): 0.30			Year: 1			Period: 1
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Clear	None	2	1	2	None	None	No	No
2	Clear	None	1	1	1	None	None	No	No
3	Clear	None	2	1	2	None	None	No	No

Date: 05/30/12			Total Rainfall (inches): 0.20			Year: 1			Period: 1
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Clear	None	1	1	1	None	None	No	No
2	Clear	None	1	1	1	None	None	No	No
3	Clear	None	1	1	1	None	None	No	No

Date: 06/11/12			Total Rainfall (inches): 1.0			Year: 1			Period: 1
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Clear	None	1	1	1	None	None	No	No
2	Clear	None	1	1	1	None	None	No	No
3	Clear	None	1	1	1	None	None	No	No

Date: 11/13/12			Total Rainfall (inches): 0.15			Year: 1			Period: 2
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Slight Brown	None	1	1-leaves	1	None	None	No	No
2	Clear	None	1	1-leaves	1	None	None	No	No
3	Clear	None	1	1	1	None	None	No	No

RECEIVED  
OCT 11 2016  
DENR-LAND QUALITY  
STORMWATER PERMITTING

# SCM Metal Products, Inc.

## Summary of Visual Monitoring Results

NCS000050

Date: 05/06/13			Total Rainfall (inches): 1.35			Year: 2			Period: 1
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Clear	None	1	2-pollen	1	None	None	No	No
2	Clear	None	2	1	2	None	None	No	No
3	Clear	None	1	1	1	None	None	No	No

Date: 12/07/13			Total Rainfall (inches): 0.20			Year: 2			Period: 2
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Clear	None	2	1	1	None	None	No	No
2	Clear	None	2	4-leaves	1	None	None	No	No
3	Clear	None	2	1	1	None	None	No	No

Date: 04/15/14			Total Rainfall (inches): 1.1			Year: 3			Period: 1
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Slight tan	None	2	1	2	None	None	Yes	No
2	Slight brown	None	1	1	1	None	None	No	No
3	Light tan	None	2	1	2	None	None	Yes	No

Date: 11/17/14			Total Rainfall (inches): 0.35			Year: 3			Period: 2
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Clear	None	1	3-leaves	1	None	None	Yes	No
2	Clear	None	1	3-leaves	1	None	None	Yes	No
3	Clear	None	1	3-leaves	1	None	None	Yes	No

# SCM Metal Products, Inc.

## Summary of Visual Monitoring Results

NCS000050

Date: 04/15/15			Total Rainfall (inches): 1.00			Year: 4			Period: 1
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Clear	None	2	1	2-silt	None	None	Yes	No
2	Clear	None	1	2-leaves	1	None	None	Yes	No
3	Clear	None	1	2-pollen	1	None	None	Yes	No

Date: 11/19/15			Total Rainfall (inches): 1.40			Year: 4			Period: 2
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Clear	None	1	1	1	None	None	Yes	No
2	Clear	None	1	2-leaves	1	None	None	No	No
3	Clear	None	1	2-leaves	2-silt	None	None	yes	No

Date: 05/13/16			Total Rainfall (inches): 0.50			Year: 5			Period: 1
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Brown	None	2	1	2	None	None	Yes	No
2	Clear	None	1	1	1	None	None	Yes	No
3	Clear	None	1	1	1	None	None	Yes	No

Date: 09/27/16			Total Rainfall (inches): 1.30			Year: 5			Period: 2
Outfall #	Color	Odor	Clarity	Floating Solids	Suspended Solids	Foam	Oil Sheen	Erosion or deposition at the outfall	Obvious indicators of pollution
1	Clear	None	1	1	1	None	None	Yes	No
2	Clear	None	1	2-leaves	1	None	None	Yes	No
3	Clear	None	1	1	1	None	None	Yes	No

# SCM Metal Products, Inc.

## Summary of Analytical Monitoring Results

Permit No. NCS000050

Date: 05/06/13		Total Rainfall (inches): 1.35	Year: 2	Period: 1	
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH	
1	1.29	0.0686	13.5	8.2	
2	1.32	0.0698	16.4	7.6	
3	0.494	0.0403	5.2	8.5	

Date: 12/07/13		Total Rainfall (inches): 0.2	Year: 2	Period: 2	
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH	
1	0.72	0.040	4.1	8.1	
2	1.2	0.058	27.1	7.9	
3	1.7	0.048	26.0	8.1	

Date: 04/15/14		Total Rainfall (inches): 1.10	Year: 3	Period: 1	
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH	
1	1.34	0.079	49.6	7.3	
2	1.62	0.026	9.3	7.4	
3	1.47	0.036	63.0	7.3	

Date: 11/17/14		Total Rainfall (inches): 0.35	Year: 3	Period: 2	
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH	
1	1.27	0.168	13.6	7.3	
2	0.848	0.050	3.1	7.1	
3	1.58	0.054	7.2	7.4	

# SCM Metal Products, Inc.

## Summary of Analytical Monitoring Results

Permit No. NCS000050

Date: 05/09/12		Total Rainfall (inches): 0.3	Year: 1	Period: 1
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH
1	13.5	0.118	145	7.7
2	0.692	0.048	<2.5	7.5
3	12.1	0.106	1180	8.1

Date: 05/30/12		Total Rainfall (inches): 0.2	Year: 1	Period: 1 (resample)
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH
1	0.599	0.082	5.1	7.8
2	0.756	0.055	16.8	7.9
3	0.360	0.030	5.6	8.4

Date: 06/11/12		Total Rainfall (inches): 1.0	Year: 1	Period: 1 (resample)
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH
1	4.29	0.102	9.1	7.7
2	0.517	0.029	<2.5	7.8
3	0.794	0.021	8.4	7.9

Date: 11/13/12		Total Rainfall (inches): 0.15	Year: 1	Period: 2
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH
1	0.919	0.037	7.0	8.0
2	0.385	0.036	ND	8.1
3	2.64	0.110	53.5	8.1

# SCM Metal Products, Inc.

## Summary of Analytical Monitoring Results

Permit No. NCS000050

Date: 04/15/15		Total Rainfall (inches): 1.00	Year: 4	Period: 1
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH
1	0.801	0.067	9.4	7.6
2	0.937	0.046	3.4	7.3
3	1.16	0.037	6.1	7.5

Date: 11/19/15		Total Rainfall (inches): 1.40	Year: 4	Period: 2
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH
1	0.675	0.035	9.7	7.6
2	0.713	0.024	3.6	7.2
3	1.08	0.019	26.3	7.5

Date: 05/13/16		Total Rainfall (inches): 0.5	Year: 5	Period: 1
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH
1	1.34	0.152	12.3	7.8
2	0.963	0.062	3.0	7.4
3	0.890	0.024	5.0	7.5

Date: 09/27/16		Total Rainfall (inches): 1.30	Year: 5	Period: 2
Outfall #	Copper, Total Recoverable (mg/l)	Zinc, Total Recoverable (mg/l)	Total Suspended Solids (TSS)	pH
1	1.39	0.117	2.7	7.1
2	1.22	0.046	ND	7.3
3	0.598	0.020	5.1	7.8

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

Permit Number NCS NCS000050

SAMPLES COLLECTED DURING CALENDAR YEAR: 2015

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

FACILITY NAME SCM Metal Products, Inc.  
PERSON COLLECTING SAMPLE(S) Westley Riscili  
CERTIFIED LABORATORY(S) Pace Analytical

**RECEIVED**

APR 28 2015

Lab # CENTRAL FILES  
DWR SECTION

COUNTY Durham  
PHONE NO. (919) 544-8090

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050						
		Total Flow (if app.)	Total Rainfall	Total Copper	Total Zinc	Total Suspended Solids	pH	Standard Units
1	4/15/15	NA	1.00	0.801	0.067	9.4	7.62	
2	4/15/15	NA	1.00	0.937	0.046	3.4	7.28	
3	4/15/15	NA	1.00	1.16	0.037	6.1	7.52	

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no  
(if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

Outfall No.	Date Sample Collected	50050		00556		00530	00400	
		Total Flow (if applicable)	Total Rainfall	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	Total Suspended Solids	pH	New Motor Oil Usage

**FILE COPY**

**STORM EVENT CHARACTERISTICS:**Date 4/15/15Total Event Precipitation (inches): 1.00

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**

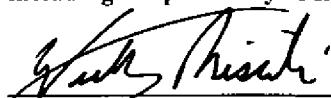
Division of Water Quality

Attn: Central Files

1617 Mail Service Center

Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."



(Signature of Permittee)

4-24-15

(Date)



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 1

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 4/15/15

Time of Inspection: 3:00 pm

Total Event Precipitation (inches): 1.00"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 1 Structure (pipe, ditch, etc.) Pipe.  
Receiving Stream: Unnamed tributary to Northeast Creek.  
Describe the industrial activities that occur within the outfall drainage area: Copper powder production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      **2**      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

**1**      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      **2**      3      4      5      Primarily silt.

**7.** Is there any **foam** in the stormwater discharge?      Yes

No

**8.** Is there an **oil sheen** in the stormwater discharge?      Yes

No

**9.** Is there evidence of **erosion or deposition** at the outfall?

Yes

No →

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_

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There is a small amount of silt in the weir. The weir was partially cleaned, but cleaning was stopped due to wet conditions and difficulty accessing the weir with the equipment. SCM will finish the cleanout once the ground is dry enough to access the weir.

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/ir/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 2

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 4/15/15

Time of Inspection: 2:38 pm

Total Event Precipitation (inches): 1.00"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

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A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 2 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe into ditch \_\_\_\_\_

Receiving Stream: Unnamed tributary of Stirrup Iron Creek \_\_\_\_\_

Describe the industrial activities that occur within the outfall drainage area: Copper Powder Production \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

Leaves and twigs were visible floating on top in the ditch. A work order will be written to have the ditch cleared.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7. Is there any foam in the stormwater discharge?** Yes

No

**8. Is there an oil sheen in the stormwater discharge?** Yes

No

**9. Is there evidence of erosion or deposition at the outfall?**

Yes       No

**10. Other Obvious Indicators of Stormwater Pollution:**

Sand and silt settled on the bottom of the ditch was noticeable. Work order will be written to have the ditch cleared.

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 3

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 4/15/15

Time of Inspection: 2:20 pm

Total Event Precipitation (inches): 1.00"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

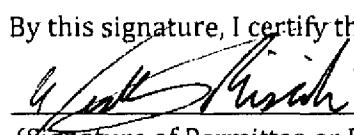
*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 3 \_\_\_\_\_ Structure (pipe, ditch, etc.) Pipe into ditch, \_\_\_\_\_  
Receiving Stream: Unnamed tributary of Stirrup Iron Creek, \_\_\_\_\_  
Describe the industrial activities that occur within the outfall drainage area: Copper powder production, \_\_\_\_\_

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear, \_\_\_\_\_

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None, \_\_\_\_\_

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5      Pollen and a few leaves.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge?      Yes       No

**8.** Is there an **oil sheen** in the stormwater discharge?      Yes       No

**9.** Is there evidence of **erosion or deposition** at the outfall?      Yes       No

Very little sand or silt, this outfall was recently cleaned.

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.

## Laboratory Report

Westley Riscili  
 SCM Metal Products, Inc.  
 2601 Weck Drive  
 Research Triangle Pa, NC 27709

Report Date: 04/23/2015  
 Date Received: 04/15/2015

Project: OUTFALLS  
 Pace Project No.: 92245661

Sample: OUTFALL #1		Lab ID: 92245661001		Collected: 04/15/15 15:00	Matrix: Water
Parameters	Results	Units	Report Limit	Analyzed	Qualifiers
Copper	801	ug/L	5.0	04/22/15 16:24	
Zinc	66.7	ug/L	10.0	04/22/15 16:24	
Total Suspended Solids	9.4	mg/L	3.1	04/16/15 10:08	

Sample: OUTFALL #2		Lab ID: 92245661002		Collected: 04/15/15 14:38	Matrix: Water
Parameters	Results	Units	Report Limit	Analyzed	Qualifiers
Copper	937	ug/L	5.0	04/20/15 19:00	
Zinc	45.9	ug/L	10.0	04/20/15 19:00	
Total Suspended Solids	3.4	mg/L	2.5	04/16/15 10:08	

Sample: OUTFALL #3		Lab ID: 92245661003		Collected: 04/15/15 14:20	Matrix: Water
Parameters	Results	Units	Report Limit	Analyzed	Qualifiers
Copper	1160	ug/L	5.0	04/22/15 16:27	
Zinc	36.5	ug/L	10.0	04/22/15 16:27	
Total Suspended Solids	6.1	mg/L	3.3	04/16/15 10:09	

Reviewed by: Liamm Carrubba  
 Liamm Carrubba

liamm.carrubba@pacelabs.com

**Raleigh Certification IDs**  
 6701 Conference Drive, Raleigh, NC 27607  
 North Carolina Wastewater Certification #: 67

North Carolina Bioassay Certification #: 16  
 North Carolina Drinking Water Certification #: 37731

**Asheville Certification IDs**  
 2225 Riverside Drive, Asheville, NC 28804  
 Florida/NELAP Certification #: E87648  
 Massachusetts Certification #: M-NC030  
 North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
 South Carolina Certification #: 99030001  
 West Virginia Certification #: 356  
 Virginia/VELAP Certification #: 460222

	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: April 04, 2013 Page 1 of 2
	Document No.: F-RAL-CS-001-rev.02	Issuing Authorities: Pace Asheville Quality Office

Client Name: SCM Metals

Where Received:  Huntersville  Asheville  Eden  Raleigh

Courier (Circle):  FedEx  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals Intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Circle Thermometer Used: IR Gun SN:122065387 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun  
IR Gun Back Up SN:122065391

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 20 C Biological Tissue Is Frozen: Yes  No  N/A

Temp. should be above freezing to 6°C

Date and Initials of person examining  
contents / Preservation  
check: NAYLUSIS

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analyses Matrix		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF /SRF Review::		Date: 4-15-15
		4-16-15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)





# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: _____ of _____																																																																																																																																																																																																																																																																																		
Company: SCM Metal Products Address: 2601 Weller Drive RTP, NC 27709 Email To: wriscil@scmmetals.com Phone: 919-287-9291 (ext) 524-8332 Requested Due Date/TAT:		Report To: Westley Riscil Copy To: Purchase Order No: P0005525 Project Name: Project Number:		Attention: Susan Munda Company Name: SCM Metal Products Address: Same Pace Quote Reference: Pace Project Manager: Pace Profile: 5681-7		REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER Storm Water Site Location: _____ STATE: _____																																																																																																																																																																																																																																																																																		
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**STORMWATER DISCHARGE OUTFALL (SDO)**  
**MONITORING REPORT**

Permit Number NCS NCS000050

**RECEIVED**

DEC 07 2015

**CENTRAL FILES**  
DWR SECTION

FACILITY NAME SCM Metal Products, Inc

PERSON COLLECTING SAMPLE(S) Westley Riscili

CERTIFIED LABORATORY(S) Pace Analytical Lab # 40

Lab # \_\_\_\_\_

SAMPLES COLLECTED DURING CALENDAR YEAR: 2015

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

COUNTY Durham  
PHONE NO. (919) 544-8090

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050						
	mo/dd/yr	MG	Total Rainfall	Total Copper	Total Zinc	Total Suspended Solids	pH	
1	11/19/15	NA	1.40	0.675	0.035	9.7	7.6	
2	11/19/15	NA	1.40	0.713	0.024	3.6	7.2	
3	11/19/15	NA	1.40	1.080	0.019	26.3	7.5	

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no  
(if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

Outfall No.	Date Sample Collected	50050		00556		00530	00400	
	mo/dd/yr	MG	Total Rainfall	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	Total Suspended Solids	pH	New Motor Oil Usage
			inches	mg/l		mg/l	unit	gal/mo

FILE COPY

**STORM EVENT CHARACTERISTICS:**Date 11/19/15Total Event Precipitation (inches): 1.40

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**

Division of Water Quality

Attn: Central Files

1617 Mail Service Center

Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."



(Signature of Permittee)

12-3-15

(Date)



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/S/0/0/0/0/0/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 1

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 11/19/15

Time of Inspection: 10:10 am

Total Event Precipitation (inches): 1.40"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

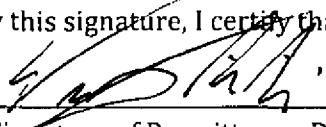
*Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).*

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "**representative storm event**" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "**measurable storm event**" is a storm event that results in **an actual discharge** from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 1 Structure (pipe, ditch, etc.) Pipe

Receiving Stream: Unnamed tributary to Northeast Creek

Describe the industrial activities that occur within the outfall drainage area: Copper powder production

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7.** Is there any **foam** in the stormwater discharge? Yes

No

**8.** Is there an **oil sheen** in the stormwater discharge? Yes

No

**9.** Is there evidence of **erosion or deposition** at the outfall?

Yes

No →

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_

There is a small amount of silt in the weir. The weir has been cleaned out and other work is to be done in December to mitigate the intrusion of silt entering this outfall. Once this work is completed, it is anticipated that the erosion will be addressed at its source and no longer be a problem.

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>

Permit No.: N/C/S/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 2

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 11/19/15

Time of Inspection: 10:22 am

Total Event Precipitation (inches): 1.40"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

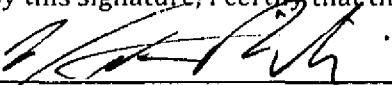
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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 2 Structure (pipe, ditch, etc.) Pipe into ditch,  
Receiving Stream: Unnamed tributary of Stirrup Iron Creek.  
Describe the industrial activities that occur within the outfall drainage area: Copper Powder Production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5      Leaves and pine needles were visible floating on top in the ditch.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7. Is there any foam in the stormwater discharge?** Yes  No

**8. Is there an oil sheen in the stormwater discharge?** Yes  No

**9. Is there evidence of erosion or deposition at the outfall?** Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

*For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/lr/npdes-stormwater/>*

Permit No.: N/C/5/0/0/0/0/5/0/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_

Facility Name: SCM Metal Products, Inc. Outfall No. 3

County: Durham Phone No. 919-544-8090

Inspector: Westley Riscili

Date of Inspection: 11/19/15

Time of Inspection: 10:35 am

Total Event Precipitation (inches): 1.40"

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

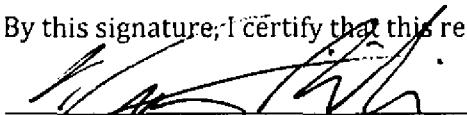
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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 3 Structure (pipe, ditch, etc.) Pipe into ditch,  
Receiving Stream: Unnamed tributary of Stirrup Iron Creek.  
Describe the industrial activities that occur within the outfall drainage area: Copper powder production.

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear/very slight brown.

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None.

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5      A few leaves were present.

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5      Slight suspended silt was evident.

**7. Is there any foam in the stormwater discharge?** Yes

No

**8. Is there an oil sheen in the stormwater discharge?** Yes

No

**9. Is there evidence of erosion or deposition at the outfall?**

Yes

No

Very little sand or silt was found suspended in discharge. This outfall needs to be scheduled for another cleaning soon.

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe \_\_\_\_\_

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**Note: Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.**

## Laboratory Report

Westley Riscili  
 SCM Metal Products, Inc.  
 2601 Weck Drive  
 Research Triangle Pa, NC 27709

Report Date: 12/02/2015  
 Date Received: 11/19/2015

Project: WESTLEY RISCILI  
 Pace Project No.: 92276801

Sample: OUTFALL #1 pH7.6		Lab ID: 92276801001	Collected: 11/19/15 10:10	Matrix: Water		
Method	Parameters	Results	Units	Report Limit	Analyzed	Qualifiers
SM 2540D	Total Suspended Solids	9.7	mg/L	2.5	11/20/15 12:49	
EPA 200.7	Copper	675	ug/L	5.0	11/30/15 14:34	
EPA 200.7	Zinc	34.8	ug/L	10.0	11/30/15 14:34	

Sample: OUTFALL #2 pH7.2		Lab ID: 92276801002	Collected: 11/19/15 10:22	Matrix: Water		
Method	Parameters	Results	Units	Report Limit	Analyzed	Qualifiers
SM 2540D	Total Suspended Solids	3.6	mg/L	2.5	11/20/15 12:50	
EPA 200.7	Copper	713	ug/L	5.0	11/30/15 14:37	
EPA 200.7	Zinc	23.7	ug/L	10.0	11/30/15 14:37	

Sample: OUTFALL #3 pH7.5		Lab ID: 92276801003	Collected: 11/19/15 10:35	Matrix: Water		
Method	Parameters	Results	Units	Report Limit	Analyzed	Qualifiers
SM 2540D	Total Suspended Solids	26.3	mg/L	4.2	11/20/15 12:50	
EPA 200.7	Copper	1080	ug/L	5.0	11/30/15 14:40	
EPA 200.7	Zinc	19.3	ug/L	10.0	11/30/15 14:40	

Reviewed by: Liamm Harrison  
 Liamm Harrison  
 liamm.harrison@pacelabs.com

### Asheville Certification IDs

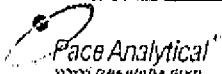
2225 Riverside Drive, Asheville, NC 28804  
 Florida/NELAP Certification #: E87648  
 Massachusetts Certification #: M-NC030  
 North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
 South Carolina Certification #: 99030001  
 West Virginia Certification #: 356  
 Virginia/VELAP Certification #: 460222

### Eden Certification IDs

205 East Meadow Road Suite A, Eden, NC 27288  
 North Carolina Drinking Water Certification #: 37738

North Carolina Wastewater Certification #: 633  
 Virginia/VELAP Certification #: 460025



Document Name: Sample Condition Upon Receipt (SCUR)

Document Revised: May 15, 2015

Page 1 of 2\*

Document No.: F-RAL-CS-001-rev.03

Issuing Authority: Pace Raleigh Quality Office

\*Page 2 of 2 is for Internal Use Only

Client Name: SCN Metals

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_Circle Thermometer Used: IR Gun S/N 122065387 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun  
IR Gun Back-Up S/N 122065371

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 5.1 C Biological Tissue Is Frozen: Yes  No  N/A

Temp should be above freezing to 6°C

Comments: Date and initials of person examining contents / Preparation check: MM/11/15

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: -Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing preservation have been checked:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA, polifilm, TOC, OSG, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF / SRF  
Review::L.A.  
U/I

Date:

11/11/15

WO# : 92276801

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



92276801



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: _____ of _____
Company: <b>SCM Metal Products</b>	Report To: <b>Westley Riscigli</b>	Attention: <b>Susan Munda</b>	1787209			
Address: <b>2601 Weck Drive</b>	Copy To: <b>SCM Metal Products</b>	Company Name: <b>SCM Metal Products</b>	REGULATORY AGENCY			
RTP, NC 27709		Address: <b>Same</b>	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER	
E-mail To: <b>wr.riscigli@scmmetals.com</b>	Purchase Order No.: <b>P000</b>	Place Quota Storage:	<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input checked="" type="checkbox"/> OTHER Stormwater	
Phone: <b>919-287-9291/919-944-8332</b>	Fax: <b></b>	Place Project Manager:	Site Location:		STATE: _____	
Requested Due Date/Time:	Project Number:	Pace Profile #: <b>SL81-2</b>				

ITEM #	SAMPLE ID (A-Z, 0-9, -,) Sample IDs MUST BE UNIQUE	Matrix Codes: MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Sediment SL Oil OI Vilage VP Air AR Tissue TS Other OT	MATRIX CODE (use additional to left)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test(s) Y/N	Residual Chlorine (Y/N)	Pace Project No./Lab ID. <b>92276801</b>		
				COMPOSITE START				Unpreserved		H <sub>2</sub> SO <sub>4</sub>	HCl	NH <sub>4</sub> OH	NH <sub>4</sub> SO <sub>4</sub>	Methanol	Other				
				DATE	TIME														
1	Outfall #1 pH 7.6	WT	G11-19-15 10:10				2	1	1							✓ Total Cu	✓	N 001	
2	Outfall #2 pH 7.2	WT	G11-19-15 10:22				2	1	1							✓ Total Zn	✓	N 002	
3	Outfall #3 pH 7.5	WT	G11-19-15 10:35				2	1	1							Total Suspended Solid		N 003	
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
ADDITIONAL COMMENTS			RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS								
			<i>Westerly Riscigli / SCM</i>		11-19-15		<i>Westley Riscigli / Pace</i>		11-19-15	11:05	S.I.	Y	N	N					

ORIGINAL		SAMPLER NAME AND SIGNATURE			
		PRINT Name of SAMPLER:			
		SIGNATURE of SAMPLER:			
		DATE Signed (MM/DD/YY):			
107-01-1C	Received or Accepted (MM/DD/YY)	Classification (GHS)	Sampled from Site No.		

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

**Permit Number NCS\_NCS000050**

**SAMPLES COLLECTED DURING CALENDAR YEAR: 2014**

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

**FACILITY NAME** SCM Metal Products, Inc

**COUNTY** Durham

**PERSON COLLECTING SAMPLE(S)** Gerard Reverri

**PHONE NO.** (919) 544-8090

**CERTIFIED LABORATORY(S)** Pace Analytical

**Lab #** 40

**RECEIVED**

APR 29 2014

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	CENTRAL FILES				Total Suspended Solids	pH		
		Total Flow (if app.)	Total Rainfall	DW	Total Copper	Total Zinc				
1	04/15/14	MG	inches		(mg/l)	(mg/l)	(mg/l)	7.3		
2	04/15/14	NA	1.10		1.34	0.079	49.6			
3	04/15/14	NA	1.10		1.62	0.026	9.3	7.4		
					1.47	0.036	63.0	7.3		

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no  
(if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Rainfall	00556	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	00530	00400	New Motor Oil Usage
		Total Flow (if applicable)		Oil & Grease (if appl.)		Total Suspended Solids	pH	
		MG	inches	mg/l		mg/l	unit	gal/mo

**STORM EVENT CHARACTERISTICS:**

Date 4/15/14

Total Event Precipitation (inches): 1.10

Event Duration (hours): ~4 (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**

Division of Water Quality

Attn: Central Files

1617 Mail Service Center

Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Susan R.

(Signature of Permittee)

4/28/14

(Date)

*Send Act/RP*

*tr*

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

Permit Number NCS NCS000050

**SAMPLES COLLECTED DURING CALENDAR YEAR: 2014**

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

FACILITY NAME SCM Metal Products, Inc.  
PERSON COLLECTING SAMPLE(S) Westley Riscili  
CERTIFIED LABORATORY(S) Pace Analytical

Lab # 40

COUNTY Durham  
PHONE NO. (919) 544-8090

Lab # \_\_\_\_\_

RECEIVED

DEC 03 2014

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Rainfall	CENTRAL FILES		Total Suspended Solids	pH	Standard Units	
		Total Flow (if app.)		Total Copper	pH				
1	11/17/14	NA	0.35	1.27	0.168	13.6	7.26		
2	11/17/14	NA	0.35	0.848	0.050	3.1	7.06		
3	11/17/14	NA	0.35	1.58	0.054	7.2	7.4		

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no (if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Rainfall	00556	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	00530	00400	New Motor Oil Usage
		Total Flow (if applicable)		mg/l		mg/l	pH	unit	
		MG	inches	mg/l					

**STORM EVENT CHARACTERISTICS:**Date 11/17/14Total Event Precipitation (inches): 0.35

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**  
Division of Water Quality  
Attn: Central Files  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."



(Signature of Permittee)

11-26-14

(Date)

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

Permit Number NCS 000057

SAMPLES COLLECTED DURING CALENDAR YEAR: 2014

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

FACILITY NAME Chemical Specialties

PERSON COLLECTING SAMPLE(S) ANGELA BAKER / DAVID HALEY

CERTIFIED LABORATORY(S) PACI Lab # 12

Lab # \_\_\_\_\_  
Lab # \_\_\_\_\_

COUNTY Cabarrus  
PHONE NO. (704) 455-4177

RECEIVED

DEC 03 2014

SIGNATURE OF PERMITTEE OR DESIGNEE  
CENTRAL FILE NUMBER REQUIRED ON PAGE 2.  
DWR SECTION

Part A: Specific Monitoring Requirements

Outfall No.	Date	50050	Total Flow (if applicable)	Total Rainfall	Cu	Zn	TSS	COD	pH
mo/dd/yr.	MG	inches	mg/L	mg/L	mg/L	mg/L	mg/L	SD Units	
001	11/17/2014	0.36	0.63	0.0736	0.253	19.5	29.0	6.08	
002	11/17/2014	0.36	0.63	0.014	0.117	3.1	ND	6.53	

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes    
(if yes, complete Part B)

Part B: Vehicle Maintenance Activity Monitoring Requirements

*N/A*

Outfall No.	Date	50050	Total Flow (if applicable)	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	Total Suspended Solids	pH	New Motor Oil Usage
mo/dd/yr.	MG	inches	mg/L	mg/L	mg/L	unit	gal/mo	

**STORM EVENT CHARACTERISTICS:**

Date 11-17-2014

Total Event Precipitation (inches): 0.63

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**

Division of Water Quality

Attn: Central Files

1617 Mail Service Center

Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

DW Hely  
(Signature of Permittee)

11-26-2014  
(Date)



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/wq/ws/su/npdessw#tab-4>

Permit No.: N/C/S/0/0/0/0/5/7/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_  
Facility Name: Chemical Specialties  
County: CABARRUS Phone No. (704) 455-4177  
Inspector: Angela Baker / Dave Haley  
Date of Inspection: 11-17-2014  
Time of Inspection: 11:20 AM

Total Event Precipitation (inches): 0.63

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "representative storm event" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "measureable storm event" is a storm event that results in an actual discharge from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature of Permittee or Designee)

1. **Outfall Description:**

Outfall No. #001 Structure (pipe, ditch, etc.) Ditch

Receiving Stream: Rocky River

Describe the industrial activities that occur within the outfall drainage area:

Chemical manufacturing

2. **Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Light Brown Liquid

3. **Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): NONE

4. **Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

5. **Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

6. **Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

7. Is there any foam in the stormwater discharge? Yes No

8. Is there an oil sheen in the stormwater discharge? Yes No

9. Is there evidence of erosion or deposition at the outfall? Yes No

10. **Other Obvious Indicators of Stormwater Pollution:**

List and describe Outfall #1 was light brown in color due to Run off from adjacent DOT railroad/bridge project.

Note: Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/wa/ws/su/npdessw#tab-4>

Permit No.: N/C/S/0/0/0/0/0/5/7/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_

Facility Name: Chemical SPECIALTIES

County: CABARRUS Phone No. (704)455-4177

Inspector: ANGELA BAKER / DAVE HALEY

Date of Inspection: 11-17-2014

Time of Inspection: 11:13 AM

Total Event Precipitation (inches): 0.63

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

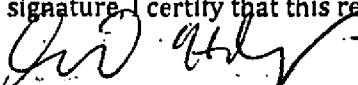
Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).

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By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. #002 Structure (pipe, ditch, etc.) Pipe

Receiving Stream: Rocky River

Describe the industrial activities that occur within the outfall drainage area:

Chemical Manufacturing

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: CLEAR LIQUID

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): NONE

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7. Is there any foam in the stormwater discharge?** Yes  No

**8. Is there an oil sheen in the stormwater discharge?** Yes  No

**9. Is there evidence of erosion or deposition at the outfall?** Yes  No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe NONE

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Note: Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

Permit Number NCS 000057

SAMPLES COLLECTED DURING CALENDAR YEAR: 2014

(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

FACILITY NAME Chemical Specialties  
 PERSON COLLECTING SAMPLE(S) Angela Baker / Dave Haley  
 CERTIFIED LABORATORY(S) PACE Lab # 12  
Lab #

COUNTY Cabarrus  
 PHONE NO. (704) 455-4177

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date	50050	Total Flow (if app.) mo/dd/yr	Total Rainfall inches	CU mg/L	Zn mg/L	SS mg/L	COD mg/L	pH	SD Units
001	05/15/2014	1.24		2.11	0.0668	0.267	24.3	35.0	7.08	
002	05/15/2014	1.24		2.11	0.023	0.114	8.2	ND	7.09	

**RECEIVED**

JUN 09 2014

CENTRAL FILES  
DWQ/BOG

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no  
(if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

*N/A*

Outfall No.	Date	50050	Total Flow (if applicable) mo/dd/yr	Total Rainfall inches	Oil & Grease (if appl.) mg/L	Non-polar O&G/TPH (Method 1664 SGT-HEM) if appl.	00530	00400	New Motor Oil Usage gal/mo.

**STORM EVENT CHARACTERISTICS:**

Date 5-15-2014

Total Event Precipitation (inches): 2.11

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

Date \_\_\_\_\_

Total Event Precipitation (inches): \_\_\_\_\_

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**

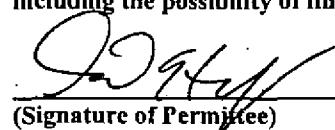
Division of Water Quality

Attn: Central Files

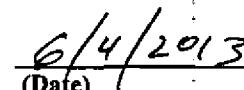
1617 Mail Service Center

Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."



(Signature of Permittee)



(Date)



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/wq/ws/su/npdssw#tab-4>

Permit No.: N/C/S/0/0/0/0/5/7/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_/\_

Facility Name: Chemical Specialties

County: Cabarrus Phone No. 704-455-4122

Inspector: Angela Baker / Dave Haley

Date of Inspection: 5-15-2014

Time of Inspection: 11:10 AM

Total Event Precipitation (inches): 2.11

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

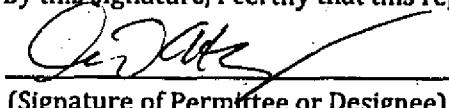
Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "representative storm event" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "measurable storm event" is a storm event that results in an actual discharge from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. #001 Structure (pipe, ditch, etc.) Ditch

Receiving Stream: Rocky River

Describe the industrial activities that occur within the outfall drainage area: \_\_\_\_\_

Chemical manufacturing

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Light brown Liquid

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): None

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7. Is there any foam in the stormwater discharge?** Yes No

**8. Is there an oil sheen in the stormwater discharge?** Yes No

**9. Is there evidence of erosion or deposition at the outfall?** Yes No

*see below*

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe Outfall #1 was a little light brown due to Runoff from adjacent DOT Railroad/Bridge project.

**Note:** Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.



## Stormwater Discharge Outfall (SDO) Qualitative Monitoring Report

For guidance on filling out this form, please visit: <http://portal.ncdenr.org/web/wq/ws/su/npdessw#tab-4>

Permit No.: N/C/S/0/0/0/0/5/7/ or Certificate of Coverage No.: N/C/G/\_/\_/\_/\_/\_/\_

Facility Name: Chemical Specialties

County: Cabarrus Phone No. 704-455-4177

Inspector: Angela Baker / Dave Haley

Date of Inspection: 5-15-2014

Time of Inspection: 11:05 AM

Total Event Precipitation (inches): 2.11

Was this a "Representative Storm Event" or "Measureable Storm Event" as defined by the permit?  
(See information below.)

Yes  No

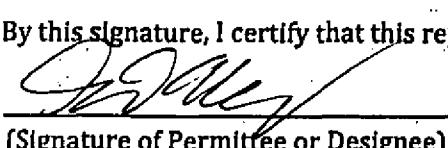
Please verify whether Qualitative Monitoring must be performed during a "representative storm event" or "measureable storm event" (requirements vary, depending on the permit).

Qualitative monitoring requirements vary. Most permits require qualitative monitoring to be performed during a "representative storm event" or during a "measureable storm event." However, some permits do not have this requirement. Please refer to these definitions, if applicable.

A "representative storm event" is a storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours (3 days) in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation.

A "measurable storm event" is a storm event that results in an actual discharge from the permitted site outfall. The previous measurable storm event must have been at least 72 hours prior. The 72-hour storm interval does not apply if the permittee is able to document that a shorter interval is representative for local storm events during the sampling period, and the permittee obtains approval from the local DWQ Regional Office.

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

  
(Signature of Permittee or Designee)

**1. Outfall Description:**

Outfall No. 002 Structure (pipe, ditch, etc.) Pipe

Receiving Stream: Rocky River

Describe the industrial activities that occur within the outfall drainage area:

Chemical Manufacturing

**2. Color:** Describe the color of the discharge using basic colors (red, brown, blue, etc.) and tint (light, medium, dark) as descriptors: Clear Liquid

**3. Odor:** Describe any distinct odors that the discharge may have (i.e., smells strongly of oil, weak chlorine odor, etc.): NONE

**4. Clarity:** Choose the number which best describes the clarity of the discharge, where 1 is clear and 5 is very cloudy:

1      2      3      4      5

**5. Floating Solids:** Choose the number which best describes the amount of floating solids in the stormwater discharge, where 1 is no solids and 5 is the surface covered with floating solids:

1      2      3      4      5

**6. Suspended Solids:** Choose the number which best describes the amount of suspended solids in the stormwater discharge, where 1 is no solids and 5 is extremely muddy:

1      2      3      4      5

**7. Is there any foam in the stormwater discharge?** Yes No

**8. Is there an oil sheen in the stormwater discharge?** Yes No

**9. Is there evidence of erosion or deposition at the outfall?** Yes No

**10. Other Obvious Indicators of Stormwater Pollution:**

List and describe NONE

Note: Low clarity, high solids, and/or the presence of foam, oil sheen, or erosion/deposition may be indicative of pollutant exposure. These conditions warrant further investigation.

# **SCM Metal Products, Inc.**

July 6, 2012

Ms. Bethany A. Georgoulas  
Environmental Engineer  
Stormwater Permitting Unit  
North Carolina Division of Water Quality  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

NPDES Stormwater Permit No. NCS000050  
SCM Metal Products, Inc.  
Durham County

Dear Bethany:

The results of storm water sampling for the first reporting period in 2012 have been received by SCM Metal Products. The results from the first set of samples indicated that the Total Suspended Solids (TSS) was above the benchmark value of 100 mg/l. The value obtained at Outfall 3 was exceedingly high and one obtained at Outfall 1 was slightly above the benchmark value. Also, the copper values obtained at these two sample sites were higher than SCM's recent historical results. Results obtained from subsequent sampling showed the TSS to be within the benchmark value at all the outfalls and all the copper results, except one, to be within the historical result values. The values are presented on the Stormwater Discharge Outfall (SDO) Monitoring Report which is attached to this letter.

A few factors may have contributed to the high TSS. These include:

1. The sampling technique used at the outfalls. Rather than taking the sample at an area of moving water, the collection bottle was placed in a relatively slow-moving portion of the storm water stream. The collection of TSS samples has improved and will be described in the revised Storm Water Monitoring Plan.
2. There had been an extraordinary rain event on the weekend of May 5 when more than two and one-quarter inches fell. This amount of water may have skewed the results of the samples taken three days later by moving a large amount of soil and other material into the storm water streams.
3. The sampling done was the first conducted since grading and drain work was done on the area that feeds Outfall 3. This grading work was done to control flooding in one of our buildings and to minimize erosion. The recently install "crush and run" gravel is still settling and this run-off may have added to the TSS result.

A few factors that may have contributed to the higher than typical copper results include:

1. The need to improve the maintenance schedule of the bio-retention device. The influent and effluent of the device was measured; these results showed that the device had lost effectiveness. The mulch was tested for copper content and it showed a high copper

# **SCM Metal Products, Inc.**

Ms. Bethany A. Georgoulias

July 6, 2012

Page 2 of 3

content. A schedule will be put in place to test the mulch on a bi-monthly basis and perform effluent testing of the bio-retention device when possible.

2. Drainage of water from a cooling water pump seal.
3. The storm water monitoring plan will be updated and re-implemented. It is expected that areas that contribute copper and solids will be identified with the revised plan.

In accordance with the conditions of SCM's storm water permit, inspections were conducted within two weeks of receiving the sampling results. Additionally, sampling was performed on two subsequent measureable storm events.

One of the first actions taken after the receipt of the results was to inform all employees of the test results at the monthly safety meetings on May 24 and 25. In addition to sharing the results, the employees were reminded to review the storm water pollution prevention plan, renew their diligence in maintaining BMP's and suggest additional BMP's.

On May 30, 2012, an inspection of the storm water discharge areas was performed by Mr. James Whitacre, a Professional Engineer with Advanced Civil Design, Cary, NC and Mr. Gerard Reverri, SCM Metal Products. On June 1, 2012 an inspection of the facility was conducted by the SCM Storm Water Monitoring Plan sampling team. Potential source controls, operational controls and physical improvements were identified. Actions that should bring the TSS parameter to within the benchmark level and improve the copper level include:

1. The "floor tanks" used to store copper powder before the powder is used in SCM copper brazing paste process have been moved from outdoor storage to indoor storage.  
(Completed)
2. Replace mulch in bio-retention device. (Completed)
3. Implement a schedule to regularly measure the copper content of the mulch in the bio-retention device. (To be done.)
4. Improve the capture of pump seal water at the cooling tower cold water well pump.  
(Completed)
5. Revise the Storm Water Monitoring plan to reflect the changes in the storm water discharge layout. (To be done.)
6. Add gravel and stabilize any area where the existing gravel has been undercut by water.  
(To be done.)
7. Place a small sump in the last inlet before the drainage exits the gravel area on the east side of the building. This sump will act as a settling area for solids. (To be done.)
8. Adding an additional inlet on the east side of the Microbond Building to intercept the offsite water that is currently draining onto the property and causing some erosion in the gravel. (To be done.)
9. Install a scour hole to slow down the water flow into the woods and to help capture suspended solids before they are discharged into the existing ditch. (To be done.)
10. Install a permanent sediment riser at the end of the north swale at the existing pipe. Currently there is fence and aggregate stopping some of the sediment but a better long term solution would be a pipe riser wrapped in filter fabric. The filter fabric should be cleaned and/or replaced periodically as sediment accumulates. (To be done.)

# **SCM Metal Products, Inc.**

Ms. Bethany A. Georgoulas

July 6, 2012

Page 3 of 3

11. The 36" outfall pipe that the ditch and bio-retention area drain into will be hydro-jetted and cleaned out. After cleaning the pipe will be inspected by camera. (To be done.)
12. An investigation of plantings in the north swale will be conducted this summer and fall.

The parameter values obtained from the May 9 storm event are not the within results the expected by SCM. It is hoped that these results are an aberration and the subsequent sample results are indicative of the improvements that SCM has implemented. The values of the May 9 sampling have been addressed in accordance to the provisions of SCM's permit and we expect that the actions already taken and those to be done will further improve the quality of SCM's storm water discharge.

If you have any questions or comments please contact me.

Regards,

Gerard Reverri  
Engineer, SCM Metal Products, Inc.

Cc: Jill Spaulding, Plant Manager  
SCM Metal Products, Inc.

Enc.

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

Permit Number: NCS000050 or  
Certificate of Coverage Number: NCG

FACILITY NAME SCM Metal Products, Inc.  
PERSON COLLECTING SAMPLE(S) Gerard Reverri  
CERTIFIED LABORATORY(S) Pace Analytical Lab #067  
Lab #

SAMPLES COLLECTED DURING CALENDAR YEAR: \_\_\_\_\_  
(This monitoring report shall be received by the Division no later than 30 days from the date the facility receives the sampling results from the laboratory.)

COUNTY Durham  
PHONE NO. ( 919 ) 544-8090

**SIGNATURE OF PERMITTEE OR DESIGNEE  
REQUIRED ON PAGE 2.**

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Flow (if app.)	Total Rainfall	Copper Total Recoverable	Zinc Total Recoverable	Total Suspended Solids	pH	Oil & Grease	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	New Motor Oil Usage
	mo/dd/yr	MG	inches	mg/l	mg/l	mg/l	mg/l		Units	gal/mo	
1	05/09/12		0.3		13.5		0.118	145	7.7		
2	05/09/12		0.3		0.692		0.048	<2.5	7.5		
3	05/09/12		0.3		12.1		0.106	1180	8.1		
1	05/30/12		0.2		0.599		0.082	5.1	7.8		
2	05/30/12		0.2		0.756		0.055	16.8	7.9		
3	05/30/12		0.2		0.360		0.030	5.6	8.4		
1	06/11/12		1.0		4.29		0.102	9.1	7.7		
2	06/11/12		1.0		0.517		0.029	<2.5	7.8		
3	06/11/12		1.0		0.794		0.021	8.4	7.9		

Does this facility perform Vehicle Maintenance Activities using more than 55 gallons of new motor oil per month? yes  no  
(if yes, complete Part B)

**Part B: Vehicle Maintenance Activity Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Rainfall	Oil & Grease (if appl.)	Non-polar O&G/TPH (Method 1664 SGT-HEM), if appl.	Total Suspended Solids	pH	New Motor Oil Usage
	mo/dd/yr	MG	inches	mg/l	mg/l	mg/l	Units	gal/mo

**STORM EVENT CHARACTERISTICS:****Date 05/09/12**Total Event Precipitation (inches): 0.3

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

(if more than one storm event was sampled)

**Date 05/30/12**Total Event Precipitation (inches): 0.2

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Date 06/11/12**Total Event Precipitation (inches): 1.0

Event Duration (hours): \_\_\_\_\_ (only if applicable – see permit.)

**Mail Original and one copy to:**

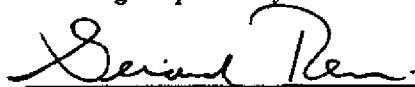
Division of Water Quality

Attn: Central Files

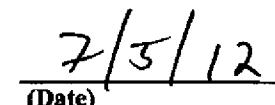
1617 Mail Service Center

Raleigh, North Carolina 27699-1617

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."



(Signature of Permittee)

  
(Date)

## **Georgoulias, Bethany**

---

**From:** Reverri, Gerard [greverri@scmmetals.com]  
**Sent:** Friday, July 06, 2012 3:04 PM  
**To:** Georgoulias, Bethany  
**Cc:** Spaulding, Jill  
**Subject:** First Half Storm Water Results  
**Attachments:** First Half 2012.doc; SDO Monitoring Report 1st Half 2012 Page 2.pdf; SDO Monitoring Report 1st Half 2012 Page 1.pdf

Bethany

Attached is a letter summarizing the results of SCM's storm water testing for the first half of 2012. The initial testing was disconcerting and the actions we have taken and will take are described in the letter.

Even with all the rain we had this first half, it was difficult to get samples because it seemed that the rain occurred at night or on weekends.

Please be assured that SCM is working to improve the quality of our storm water discharge. If you have any questions, please contact me.

Regards,

Gerard Reverri  
Engineer  
SCM Metal Products, Inc.  
2601 Weck Drive  
PO Box 12166  
RTP, NC 27709

Direct Dial (919) 287-9877  
Fax (919) 544-8332

April 3, 2003

Division of Water Quality  
Water Quality Section  
ATTENTION: Central Files  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

Reference: Permit No. NCS000050

Dear Sir/Madam:

As required by the terms of the above referenced Stormwater Discharge Permit, the following table presents the results of a storm event on March 13, 2003 from our representative storm water discharge outfall.

Discharge Characteristic	Measurement	Units
Total Nitrogen	1.24	Mg/l
Total Rainfall	0.36	inches
Event Duration	150	Minutes
Total Flow	0.015251 (15,251 Gallons)	MG

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Regards,

James E. Myers  
Vice-President Manufacturing

June 10, 2003

Division of Water Quality  
Water Quality Section  
ATTENTION: Central Files  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

Reference: Permit No. NCS000050

Dear Sir/Madam:

As required by the terms of the above referenced Stormwater Discharge Permit, the following table presents the results of a storm event on May 21, 2003 from our representative storm water discharge outfall.

Discharge Characteristic	Measurement	Units
Total Nitrogen	1.27	Mg/l
Total Rainfall	1.9	inches
Event Duration	1260	Minutes
Total Flow	0.111 (111,198 Gallons)	MG

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Regards,

James E. Myers  
Vice-President Manufacturing

September 29, 2003

Division of Water Quality  
Water Quality Section  
ATTENTION: Central Files  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

Reference: Permit No. NCS000050

Dear Sir/Madam:

As required by the terms of the above referenced Stormwater Discharge Permit, the following table presents the results of a storm event on September 4, 2003 from our representative storm water discharge outfall.

Discharge Characteristic	Measurement	Units
Total Nitrogen	0.97	Mg/l
Total Rainfall	0.25	inches
Event Duration	213	Minutes
Total Flow	.0115 (11,500 Gallons)	MG

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Regards,

James E. Myers  
Vice-President Manufacturing

December 9, 2003

Division of Water Quality  
Water Quality Section  
ATTENTION: Central Files  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

Reference: Permit No. NCS000050

Dear Sir/Madam:

As required by the terms of the above referenced Stormwater Discharge Permit, the following table presents the results of a storm event on November 19, 2003 from our representative storm water discharge outfall.

Discharge Characteristic	Measurement	Units
Total Nitrogen	1.16	Mg/l
Total Rainfall	1.25	inches
Event Duration	180	Minutes
Total Flow	0.072 (72,000Gallons)	MG

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Regards,

James E. Myers  
Plant Manager

**Sample Collection Form &  
Copper Contribution Determination for Stormwater Discharge**

Date of Event	03/13/03
Event Start Time	
Event End Time	
Total Time	
Rainfall (Inches)	0.36

Sample Point Number	Time of Sample (24 Hour Clock)	pH	Outfall 1	Area (SQ FT)	Description	Run-Off Coefficient	Total Flow (liter)	Total Cu Concentration (mg/L)	Total Cu (LB)	Percent of Outfall Copper	Percent of Sum of Sampling Point Copper	Gallons (This Value for May 11, 2007 Letter)
1			Outfall 1	188600		0.67	107342					28360
3			Copper Production Downspout North West End	1800	Gravel Covered Rubber Roof	0.9	1133					299
4			Copper Production Downspout North Center	3500	Gravel Covered Rubber Roof	0.9	2204					582
5			Copper Production Downspout North East End	1800	Gravel Covered Rubber Roof	0.9	1133					299
6			Copper Production Downspout South Center	3500	Gravel Covered Rubber Roof	0.9	2204					582
7			Tin Production Downspout	2720	Gravel Covered Rubber Roof	0.9	1713					452
8			Warehouse Downspout	5380	Gravel Covered Rubber Roof	0.9	3387					895
9			Thin Layer 3 Downspout	5200	Gravel Covered Rubber Roof	0.9	3274					865
10			Copper/ Maintenance Catch Basin 1	8440	Paved Asphalt/ Metal Roof	0.81	4783					1264
11			Loading Dock Catch Basin	4700	Paved Asphalt/ Concrete	0.85	2795					738
12			"Microbond Building" West Down Spout	3320	Metal Roof	0.9	2090					552
13			Swale Behind Maintenance/CuBond	45,020	Metal Roof, Concrete, "Rip Rap", Wooded Area	0.35	11024					2912
			Total Square Feet	85380						0		
			Outfall 2									
2			Outfall 2	103260		0.56	49122					12978
14			Research Lab Downspout (Near tub polisher)	5430	Gravel Covered Rubber Roof	0.9	4151					1097
15			Guard House Catch Basin	4600	Asphalt Paved Area	0.85	3321					878
16			R&D Catch Basin	7100	Asphalt Pavement/ Landscaped Area	0.42	2533					669
17			Main Parking Exitway Catch Basin	31500	Asphalt Pavement/ Landscaped Area	0.39	10436					2757
			Total Square Feet	48630						0		
			No Outfall Assigned									
18			"Microbond Building" East Down Spout	1750	Metal Roof	0.9	1102					291

Total Flow = (FT^2)(Inch of Rainfall)(1/12 FT/IN)(28.316 L/FT^3)(Run-Off Coefficient)

Total Cu = (total Flow L)(Cu Concentration mg/L)(1/1000 gm/mg)(1/454 LB/gm)

**Sample Collection Form &  
Copper Contribution Determination for Stormwater Discharge**

Date of Event	05/21/03
Event Start Time	
Event End Time	
Total Time	
Rainfall (Inches)	1.9

Sample Point Number	Time of Sample (24 Hour Clock)	pH	Outfall 1	Area (SQ FT)	Description	Run-Off Coefficient	Total Flow (liter)	Total Cu Concentration (mg/l)	Total Cu (LB)	Percent of Outfall Copper	Percent of Sum of Sampling Point Copper	Gallons (This Value for May 11, 2007 Letter)
1			Outfall 1	188600		0.67	566527					149677
3			Copper Production Downspout North West End	1800	Gravel Covered Rubber Roof	0.9	5982					1580
4			Copper Production Downspout North Center	3500	Gravel Covered Rubber Roof	0.9	11631					3073
5			Copper Production Downspout North East End	1800	Gravel Covered Rubber Roof	0.9	5982					1580
6			Copper Production Downspout South Center	3500	Gravel Covered Rubber Roof	0.9	11631					3073
7			Tin Production Downspout	2720	Gravel Covered Rubber Roof	0.9	9039					2388
8			Warehouse Downspout	5380	Gravel Covered Rubber Roof	0.9	17878					4723
9			Thin Layer 3 Downspout	5200	Gravel Covered Rubber Roof	0.9	17280					4565
10			Copper/ Maintenance Catch Basin 1	8440	Paved Asphalt/ Metal Roof	0.81	25242					6669
11			Loading Dock Catch Basin	4700	Paved Asphalt/ Concrete	0.85	14751					3897
12			"Micrbond Building" West Down Spout	3320	Metal Roof	0.9	11033					2915
13			Swale Behind Maintenance/CuBond	45,020	Metal Roof, Concrete, "Rip Rap", Wooded Area	0.35	58180					15371
			Total Square Feet	85380					0			
			Outfall 2									
2			Outfall 2	103260		0.56	259253					68495
14			Research Lab Downspout (Near tub polisher)	5430	Gravel Covered Rubber Roof	0.9	21910					5789
15			Guard House Catch Basin	4600	Asphalt Paved Area	0.85	17530					4631
16			R&D Catch Basin	7100	Asphalt Pavement/ Landscaped Area	0.42	13369					3532
17			Main Parking Exitway Catch Basin	31500	Asphalt Pavement/ Landscaped Area	0.39	55078					14552
			Total Square Feet	48630					0			
			No Outfall Assigned									
18			"Micrbond Building" East Down Spout	1750	Metal Roof	0.9	5815					1536

Total Flow = (FT^2)(Inch of Rainfall)(1/12 FT/IN)(28.316 L/FT^3)(Run-Off Coefficient)

Total Cu = (total Flow L)(Cu Concentration mg/L)(1/1000 gm/mg)(1/454 LB/gm)

**Sample Collection Form &  
Copper Contribution Determination for Stormwater Discharge**

Date of Event	09/04/03
Event Start Time	
Event End Time	
Total Time	
Rainfall (Inches)	0.25

Sample Point Number	Time of Sample (24 Hour Clock)	pH	Outfall 1	Area (SQ FT)	Description	Run-Off Coefficient	Total Flow (liter)	Total Cu Concentration (mg/l)	Total Cu (LB)	Percent of Outfall Copper	Percent of Sum of Sampling Point Copper	Gallons (This Value for May 11, 2007 Letter)
1			Outfall 1	188600		0.67	74543					19694
3			Copper Production Downspout North West End	1800	Gravel Covered Rubber Roof	0.9	787					208
4			Copper Production Downspout North Center	3500	Gravel Covered Rubber Roof	0.9	1530					404
5			Copper Production Downspout North East End	1800	Gravel Covered Rubber Roof	0.9	787					208
6			Copper Production Downspout South Center	3500	Gravel Covered Rubber Roof	0.9	1530					404
7			Tin Production Downspout	2720	Gravel Covered Rubber Roof	0.9	1189					314
8			Warehouse Downspout	5380	Gravel Covered Rubber Roof	0.9	2352					622
9			Thin Layer 3 Downspout	5200	Gravel Covered Rubber Roof	0.9	2274					601
10			Copper/ Maintenance Catch Basin 1	8440	Paved Asphalt/ Metal Roof	0.81	3321					876
11			Loading Dock Catch Basin	4700	Paved Asphalt/ Concrete	0.85	1941					513
12			"Microbond Building" West Down Spout	3320	Metal Roof	0.9	1452					384
13			Swale Behind Maintenance/CuBond	45,020	Metal Roof, Concrete, "Rip Rap", Wooded Area	0.35	7655					2023
			Total Square Feet	85380					0			
			Outfall 2									
2			Outfall 2	103260		0.56	34112					9012
14			Research Lab Downspout (Near tub polisher)	5430	Gravel Covered Rubber Roof	0.9	2883					762
15			Guard House Catch Basin	4600	Asphalt Paved Area	0.85	2307					609
16			R&D Catch Basin	7100	Landscaped Area	0.42	1759					465
17			Main Parking Exitway Catch Basin	31500	Asphalt Pavement/ Landscaped Area	0.39	7247					1915
			Total Square Feet	48630					0			
			No Outfall Assigned									
18			"Microbond Building" East Down Spout	1750	Metal Roof	0.9	765					202

Total Flow = (FT^2)(Inch of Rainfall)(1/12 FT/IN)(28.316 L/FT^3)(Run-Off Coefficient)

Total Cu = (total Flow L)(Cu Concentration mg/L)(1/1000 gm/mg)(1/454 LB/gm)

**Sample Collection Form &  
Copper Contribution Determination for Stormwater Discharge**

Date of Event	11/19/03
Event Start Time	
Event End Time	
Total Time	
Rainfall (inches)	1.25

Sample Point Number	Time of Sample (24 Hour Clock)	pH	Outfall 1	Area (SQ FT)	Description	Run-Off Coefficient	Total Flow (liter)	Total Cu Concentration (mg/l)	Total Cu (LB)	Percent of Outfall Copper	Percent of Sum of Sampling Point Copper	Gallons (This Value for May 11, 2007 Letter)
1			Outfall 1	188600		0.67	372715					98472
3			Copper Production Downspout North West End	1800	Gravel Covered Rubber Roof	0.9	3935					1040
4			Copper Production Downspout North Center	3500	Gravel Covered Rubber Roof	0.9	7652					2022
5			Copper Production Downspout North East End	1800	Gravel Covered Rubber Roof	0.9	3935					1040
6			Copper Production Downspout South Center	3500	Gravel Covered Rubber Roof	0.9	7652					2022
7			Tin Production Downspout	2720	Gravel Covered Rubber Roof	0.9	5947					1571
8			Warehouse Downspout	5380	Gravel Covered Rubber Roof	0.9	11762					3108
9			Thin Layer 3 Downspout	5200	Gravel Covered Rubber Roof	0.9	11369					3004
10			Copper/ Maintenance Catch Basin 1	8440	Paved Asphalt/ Metal Roof	0.81	16607					4388
11			Loading Dock Catch Basin	4700	Paved Asphalt/ Concrete	0.85	9705					2564
12			"Micrbond Building" West Down Spout	3320	Metal Roof	0.9	7258					1918
13			Swale Behind Maintenance/CuBond	45,020	Metal Roof, Concrete, "Rip Rap", Wooded Area	0.35	38276					10113
			Total Square Feet	65380					0			
			Outfall 2									
2			Outfall 2	103260		0.56	170561					45062
14			Research Lab Downspout (Near tub polisher)	5430	Gravel Covered Rubber Roof	0.9	14415					3808
15			Guard House Catch Basin	4600	Asphalt Paved Area	0.85	11533					3047
16			R&D Catch Basin	7100	Asphalt Pavement/ Landscaped Area	0.42	8796					2324
17			Main Parking Exitway Catch Basin	31500	Asphalt Pavement/ Landscaped Area	0.39	36236					9573
			Total Square Feet	48630					0			
			No Outfall Assigned									
18			"Micrbond Building" East Down Spout	1750	Metal Roof	0.9	3826					1011

Total Flow = (FT^2)(Inch of Rainfall)(1/12 FT/IN)(28.316 L/FT^3)(Run-Off Coefficient)

Total Cu = (total Flow L)(Cu Concentration mg/L)(1/1000 gm/mg)(1/454 LB/gm)

**STORMWATER DISCHARGE OUTFALL (SDO)  
MONITORING REPORT**

**PERMIT NO. NCS 000050**

**SAMPLES COLLECTED DURING CALENDAR YEAR: 1999**

(all samples collected during a calendar year shall be reported no later than January 31 of the following year)

**FACILITY NAME SCM Metal Products, Inc.**

**PERSON COLLECTING SAMPLE(S) Michael R. Casselman**

**CERTIFIED LABORATORY(S) Tritest Lab # 067**

Lab #

**COUNTY Durham**

**PHONE NO. (919) 544-8090**

*James M.*

**(SIGNATURE OF PERMITTEE OR DESIGNEE)**  
By this signature, I certify that this report is accurate  
complete to the best of my knowledge

**Part A: Specific Monitoring Requirements**

Outfall No.	Date Sample Collected	50050	Total Flow	COPPER	ZINC	PHENOL	oIL & GREASE	MERCURY	LEAD	MANGANESE	CHLORIDE
	mo/dd/yr	MG	Mg /ML	Ug /ML	Ug /ML	Ug /ML	MG /ML	Ug /ML	MG /ML	Ug /ML	MG /ML
001	5/14/1999	0.010	6,940	542	10.6	2.80	<0.2	19			

*6.99 mg/l 0.542 mg/l 10.6 ug/l 2.8 mg/l 0.019 mg/l*

*(units above incorrect)*

*SPM does*

#### #4 SUMMARY OF BEST MANAGEMENT PRACTICES

1. A drum crusher is used to compact empty scrap drums for recycling. A small containment berm and a catch basin have been added. The crusher and area are inspected on the semi-annual site inspections.
2. A daily inspection of the outside raw material storage area and the cleaning up of any spills, wastes, or trash is documented in a log kept by the shift foreman.
3. Planned BMP - to add broken bag detectors to our dust collectors is in progress.
4. Planned BMP - for the addition of two major dust collectors is also in progress and will be complete by May 1, 1999. This BMP will consist of dust collectors to capture the exhaust of our copper melting furnace and our two copper powder reduction furnaces.
5. Planned BMP – improvements to existing dust collectors to increase efficiency.
6. Hired consultant to review all existing dust collection systems and make recommendations for changes. Currently implementing recommended changes

#### #5 NARRATIVE ON SIGNIFICANT CHANGES IN INDUSTRIAL ACTIVITIES

The only significant change in industrial activities at this facility would be the change from dissociated ammonia to hydrogen as a reducing atmosphere in our furnaces. We have removed our outside ammonia storage tank and are operating from a temporary liquid hydrogen tank. We are working on the installation of a permanent liquid hydrogen tank.

A new building attached to the east side of the warehouse has been added. It is designated "Microbond" on the site drawing included. It was built to house existing production operations plus a new solder alloy atomizing operation.

The processing of tool steel powders is no longer done at this facility.

# Chapter 5

## Cape Fear River Subbasin 03-06-05

Including: New Hope Creek, Northeast Creek and Jordan Reservoir

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### 5.1 Subbasin Overview

<b><i>Subbasin 03-06-05 at a Glance</i></b>	
<b><u>Land and Water Area</u></b>	
Total area:	269 mi <sup>2</sup>
Land area:	251 mi <sup>2</sup>
Water area:	18 mi <sup>2</sup>
<b><u>Population Statistics</u></b>	
2000 Est. Pop.:	112,558 people
Pop. Density:	419 persons/mi <sup>2</sup>
<b><u>Land Cover (percent)</u></b>	
Forest/Wetland:	78.2%
Surface Water:	8.2%
Urban:	6.4%
Cultivated Crop:	0.6%
Pasture/ Managed Herbaceous:	6.6%
<b><u>Counties</u></b>	
Chatham, Durham, Orange and Wake	
<b><u>Municipalities</u></b>	
Apex, Cary, Durham and Morrisville	

Subbasin 03-06-05 overlies the geology of the Triassic Basin, with all but the largest streams having regular very low flow periods. Most of the watershed is forested, with large urban areas in the eastern upland areas. Jordan Reservoir is a substantial percentage of the subbasin area. Development is occurring in the Wake County portion of the subbasin. Population is expected to grow by 250,000 people in counties with portions or all of their areas in this subbasin by 2020. Most of the growth is expected in Wake County, with only a small portion in this subbasin.

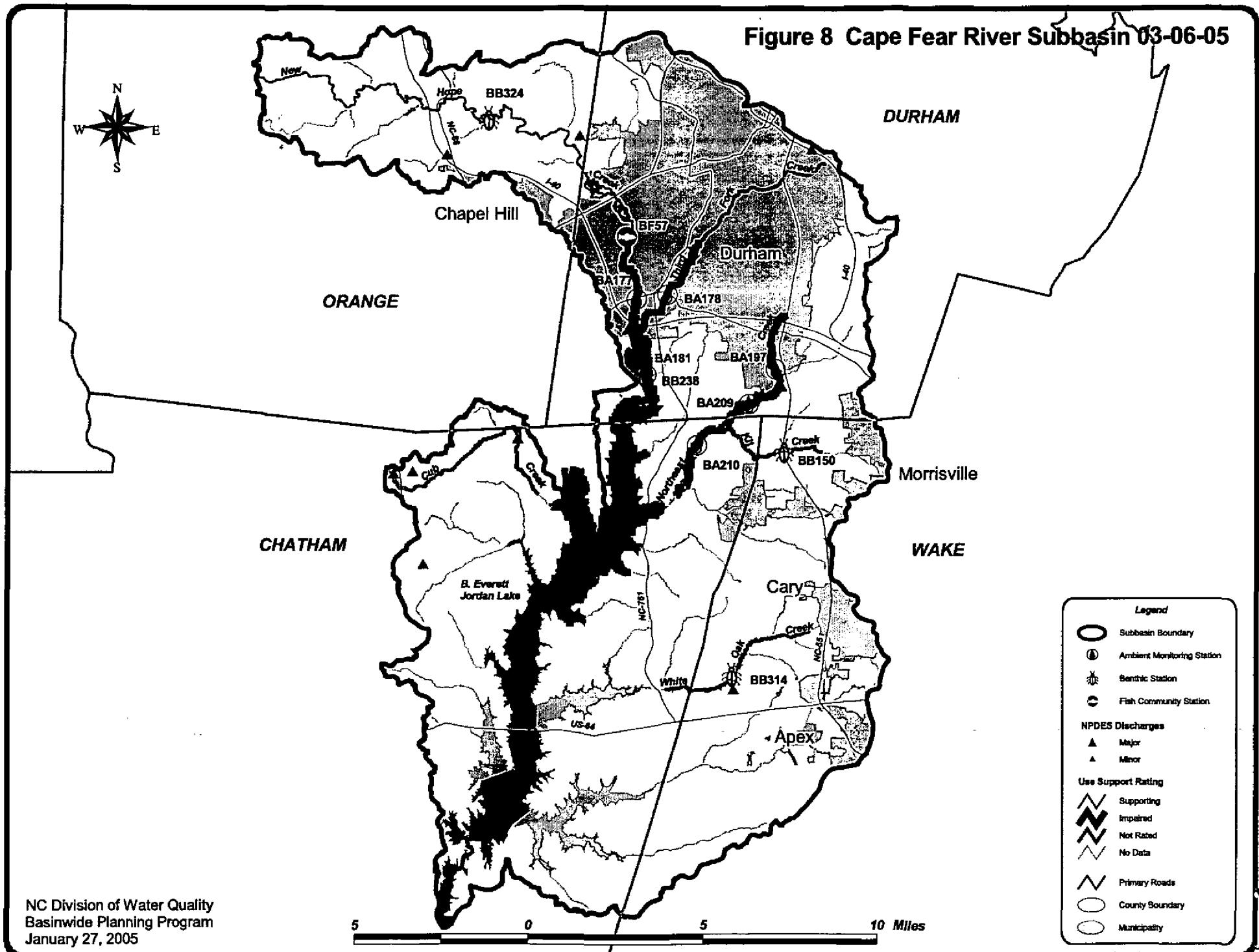
There are 11 individual NPDES wastewater discharge permits in this subbasin with a permitted flow of 32.4 MGD (Figure 8). The largest are Triangle WWTP (12 MGD) and South Durham WRF (20 MGD). Refer to Appendix VI and Chapter 30 for more information on NPDES permit holders. Issues related to compliance with NPDES permit conditions are discussed below in Section 5.3 for Impaired waters and in Section 5.4 for other waters.

Apex, Cary, Durham and Morrisville are required to develop Phase II stormwater programs (Chapter 31).

There were four benthic macroinvertebrate community samples and one fish community sample (Figure 8 and Table 12) collected during this assessment period. Data were also collected from six ambient monitoring stations including one DWQ station, four UCFRBA (Appendix V) stations and one shared ambient station. Three reservoirs were also monitored. Refer to the *2003 Cape Fear River Basinwide Assessment Report* at <http://www.esb.enr.state.nc.us/bar.html> and Appendix IV for more information on monitoring.

Waters in the following sections are identified by assessment unit number (AU#). This number is used to track defined segments in the water quality assessment database, 303(d) Impaired waters list and the various tables in this basin plan. The assessment unit number is a subset of the DWQ index number (classification identification number). A letter attached to the end of the AU# indicates that the assessment is smaller than the DWQ index segment. No letter indicates that the assessment unit and the DWQ index segment are the same.

Figure 8 Cape Fear River Subbasin 03-06-05



**Cape Fear Subbasin 03-06-05**

AU Number	Length Area	Rating AL	Rating REC	Benthic Community			Fish Community			Ambient Data			
				Station	Year	Bioclass	Station	Year	Bioclass	Station	Parameter	%	Geomean
<b>Cub Creek</b>													
16-41-2-10-(0.5)													
<b>Kit Creek</b>													
16-41-1-17-2-(0.7)	8.0 FWmiles		NR	BB150	2003	NR							
<b>New Hope Creek</b>													
16-41-1-(0.5)a	17.5 FWmiles	S		BB324	2003	GF							
16-41-1-(0.5)b	0.7 FWmiles	S		BF57	2003	GF							
16-41-1-(11.5)a	0.4 FWmiles	S		BF57	2003	GF							
16-41-1-(11.5)b	3.5 FWmiles	I	NR				BA177	dissolved oxygen <4mg/l	12.9		standards violation		
							BA177	fecal coliform bacteria	29.3		parameter elevated		
							BA177	no criteria exceeded			no criteria exceeded		
							BA177	no criteria exceeded	47.6		standards violation		
							BA177	turbidity	12.2		standards violation		
16-41-1-(11.5)c	4.0 FWmiles	I	S	BB238	2003	F	BA181	fecal coliform bacteria			no criteria exceeded		
							BA181	no criteria exceeded	28.6		standards violation		
							BA181	no criteria exceeded			no criteria exceeded		
<b>New Hope Creek (including New Hope Creek Arm of New Hope River Arm of B. Everett Jordan Lake)</b>													
16-41-1-(14)	1,415.7 FWacres	I					Lake Mo	chlorophyll a	73		standards violation		
<b>New Hope River Arm of B. Everett Jordan Lake (below normal pool elevation)</b>													
16-41-(0.5)	1,199.8 FWacres	I					Lake Mo	chlorophyll a	40		standards violation		
16-41-(3.5)a	5,673.3 FWacres	I					Lake Mo	chlorophyll a	14.3		standards violation		
							Lake Mo	chlorophyll a	20		standards violation		
							Lake Mo	chlorophyll a	27		standards violation		

**Cape Fear Subbasin 03-06-05**

AU Number	Length Area	Rating AL	Rating REC	Benthic Community			Fish Community			Ambient Data			
				Station	Year	Bioclass	Station	Year	Bioclass	Station	Parameter	%	Geomean
<b>Northeast Creek</b>													
16-41-1-17-(0.7)a	3.3 FWmiles	I	S				BA197	dissolved oxygen <4mg/l		11.3		standards violation	
							BA197	fecal coliform bacteria				no criteria exceeded	
							BA197	fecal coliform bacteria		24.4		parameter elevated	
							BA197	no criteria exceeded				no criteria exceeded	
							BA197	turbidity		14.6		standards violation	
16-41-1-17-(0.7)b1	3.3 FWmiles	I	I				BA209	fecal coliform bacteria		36.5		parameter elevated	
							BA209	fecal coliform bacteria		277.0		standards violation	
							BA209	fecal coliform bacteria		314.0		parameter elevated	
							BA209	no criteria exceeded				no criteria exceeded	
							BA209	no criteria exceeded		27.3		standards violation	
							BA209	no criteria exceeded				no criteria exceeded	
							BA209	turbidity		10.3		standards violation	
16-41-1-17-(0.7)b2	3.2 FWmiles	I	S				BA210	fecal coliform bacteria				no criteria exceeded	
							BA210	fecal coliform bacteria		22		parameter elevated	
							BA210	no criteria exceeded				no criteria exceeded	
							BA210	no criteria exceeded		40.9		standards violation	
							BA210	no criteria exceeded				no criteria exceeded	
							BA210	turbidity		14.6		standards violation	

**Cape Fear Subbasin 03-06-05**

<b>AU Number</b>	<b>Length Area</b>	<b>Rating AL</b>	<b>Rating REC</b>	<b>Benthic Community</b>			<b>Fish Community</b>			<b>Ambient Data</b>			
				Station	Year	Bioclass	Station	Year	Bioclass	Station	Parameter	%	Geomean
<b>Third Fork Creek</b>													
16-41-1-12-(1)	5.2 FWmiles												
16-41-1-12-(2)	3.9 FWmiles	I	NR							BA178	dissolved oxygen <5mg/l	25	parameter elevated
										BA178	fecal coliform bacteria	39	parameter elevated
										BA178	fecal coliform bacteria	219.0	parameter elevated
										BA178	no criteria exceeded		no criteria exceeded
										BA178	no criteria exceeded	66.7	parameter elevated
										BA178	turbidity	12.2	standards violation
<b>White Oak Creek</b>													
16-41-6-(0.7)	5.9 FWmiles	NR		BB314	'2003	NR							
				BB314	'2003	NR							

## Cape Fear Subbasin 03-06-05

AU Number	Length	Area	Rating	Rating	Benthic Community			Fish Community			Ambient Data		
			AL	REC	Station	Year	Bioclass	Station	Year	Bioclass	Station	Parameter	%

**Assessment Unit #** - Portion of DWQ Classified Index where monitoring is applied to assign a use support rating.

**Use Categories:** Monitoring data type:

AL - Aquatic Life BF - Fish Community Survey  
 REC - Recreation BB - Benthic Community Survey  
                   BA - Ambient Monitoring Site  
                   Lake Mo- Lake Monitoring

Bioclassifications:

E - Excellent  
 G - Good  
 GF - Good-Fair  
 F - Fair  
 P - Poor  
 NI - Not Impaired  
 N- Natural  
 M- Moderate  
 S-Severe

Use Support Ratings 2004:

S - Supporting, I - Impaired,  
 NR - Not Rated

### Aquatic Life Ratings Summary

S	m	FWmiles	18.6
I	m	FWacres	8,288.8
I	m	FWmiles	21.1
NR	e	FWmiles	13.2
NR	m	FWmiles	10.1
No Data	FWacres		2,613.6
No Data	FWmiles		131.4
Total	FWacres		10,902.4
Total	FWmiles		194.5

### Recreation Ratings Summary

S	m	FWmiles	10.5
I	m	FWmiles	3.3
NR	m	FWmiles	7.4
No Data	FWacres		10,902.4
No Data	FWmiles		173.4
Total	FWacres		10,902.4
Total	FWmiles		194.5

## **5.2 Use Support Assessment Summary**

Use support ratings were assigned for waters in subbasin 03-06-05 in the aquatic life, recreation, fish consumption and water supply categories. All waters are Impaired on an evaluated basis in the fish consumption category because fish consumption advice that applies to the entire basin. In the water supply category, all WS classified waters (10,902.4 acres and 124.9 miles) are Supporting on an evaluated basis based on reports from DEH regional water treatment plant consultants. Refer to Appendix X for a complete list of monitored waters and more information on Supporting monitored waters.

There were 49.9 stream miles (25.6 percent) and 8,288.8 freshwater acres (76.0 percent) monitored during this assessment period in the aquatic life category. There were 21.1 miles (10.9 percent) and 8,288.8 acres (76.0 percent) of Impaired waters in this category. There were also 3.3 miles (1.7 percent) Impaired for recreation in this subbasin.

## **5.3 Status and Recommendations of Previously and Newly Impaired Waters**

The following waters were either identified as Impaired in the previous basin plan (2000) or are newly Impaired based on recent data. If previously identified as Impaired, the water will either remain on the state's 303(d) list or will be delisted based on recent data showing water quality improvements. If the water is newly Impaired, it will likely be placed on the 2006 303(d) list. The current status and recommendations for addressing these waters are presented below, and each is identified by an assessment unit number (AU#). Refer to the overview for more information on AUs. Information regarding 303(d) listing and reporting methodology is presented in Appendix VII.

### **5.3.1 B. Everett Jordan Reservoir**

**New Hope Creek Arm [AU # 16-41-1-(14)]**

**New Hope River Arm [AU # 16-41-(0.5) and (3.5)a]**

**Morgan Creek Arm [AU # 16-41-2-(9.5)]**

**Haw River Arm [AU # 16-(37.3) and (37.5)]**

#### **2000 Recommendations**

The 2000 basin plan recommended that DWQ continue to monitor Jordan Reservoir to assess impacts from increasing wastewater discharges and development in the watershed and to update the NSW strategy for the reservoir and its watershed.

#### **Current Status**

Jordan Reservoir (9,766.5 acres) is Impaired because the chlorophyll *a* standard was violated at stations in all mainstem segments of the reservoir and because modeling indicated violations of the chlorophyll *a* standard in the New Hope Creek, Morgan Creek and Haw River Arms of the reservoir. The highest chlorophyll *a* levels were collected from August to November.

Chlorophyll *a* levels exceeded the standard in 73 percent of samples in the New Hope River Arm and in 13 percent of samples in mid reservoir. Blooms of blue-green algae associated with taste and odor problems in drinking water were observed in July 2003. The reservoir has been eutrophic since 1982. The Beaver Creek, Parkers Creek and White Oak Creek Arms (2,613.5

acres) are Not Rated for aquatic life. Data to assess recreation use support were not collected in the reservoir. For more information on use support assessment and 303(d) listing refer to Chapter 36

#### 2005 Recommendations

Refer to Chapter 36 for complete discussions of the Jordan NSW strategy, TMDLs, modeling, monitoring, HB515 and SB1366. DWQ, with the Jordan stakeholders, will continue to monitor the reservoir to assess water quality changes associated with implementation of the NSW strategies.

Segments 16-41-1-(14), 16-41-1-(0.5) and 16-41-2-(9.5) will remain on the 303(d) list. The Haw River and New Hope River Arms will be added to the 303(d) list. TMDLs are currently being developed to address the Impairment in Jordan Reservoir (Chapter 36).

#### **5.3.2 New Hope Creek [AU# 16-41-1-(0.5)a, b, and (11.5)a, b and c]**

##### 2000 Recommendations

The 2000 basin plan recommended that DWQ work with the stormwater programs to help improve water quality in New Hope Creek. DWQ also encouraged smaller facilities to connect to the regional WWTP where possible.

##### Current Status

New Hope Creek [16-41-1-(0.5)a] from source to Sandy Creek (17.4 miles) is Supporting aquatic life because of a Good-Fair benthic community rating at site BB324.

New Hope Creek [16-41-1-(0.5)b and (11.5)a] from Sandy Creek to SR 2220 (1.1 miles) is Supporting aquatic life because of a Good-Fair fish community rating at site BF57. The creek had no intolerant species indicating degraded water quality.

New Hope Creek [16-41-1-(11.5)b] from SR 2220 to I-40 (3.5 miles) is Impaired for aquatic life because the dissolved oxygen standard was violated in 13 percent of samples and the turbidity standard was violated in 12 percent of samples collected during the assessment period at site BA177. This segment is Not Rated for recreation because fecal coliform bacteria screening criteria were exceeded at site BA177.

DWQ performed a statistical trend analysis at site BA177 using total nitrogen, total phosphorus and total suspended solids data collected from 1990 to 2004. There was a significant decrease in total nitrogen of 0.17 mg/l per year in New Hope Creek. Downward trends were noted for total phosphorus and total suspended solids, although these trends were not significant (DENR-DWQ, trends memo, October 2004).

New Hope Creek [16-41-1-(11.5)c] from I-40 to SR 1107 (4.0 miles) is Impaired for aquatic life because of a Fair benthic community rating at site BB238. The riparian zone was intact at site BB238, but the banks were steep and eroding and there was little pool and riffle habitat. The stream also contains trash from the surrounding urban watershed. DWQ completed a fecal coliform study in New Hope Creek in 2000 and determined that fecal coliform bacteria did not exceed the standard in this segment. This segment is Supporting recreation because of this

sampling (DENR-DWQ, 2000). There are many single family NPDES permitted discharges in this watershed that may contributing oxygen consuming wastes as well as bacteria and nutrients.

#### 2005 Recommendations

DWQ will continue to monitor the New Hope Creek to identify stressors to the benthic community. DWQ will continue to work with Durham Stormwater program to pursue funding for BMPs in the New Hope Creek watershed further decrease nutrient loading into Jordan Reservoir. Further recommendations to protect streams in urbanizing areas and to restore streams in existing urban areas are discussed in Chapter 31.

Segment 16-41-1-(11.5)b and c remain on the 303(d) list. Segments 16-41-(0.5)a and b and 16-41-(11.5)a will be removed from the 303(d) list. TMDLs (Chapter 35) will be developed for identified stressors within 8-13 years of listing.

#### Water Quality Initiatives

In 1997, the Durham County received a \$750,000 CWMFT (Chapter 34) grant to purchase 340 acres of conservation easements along New Hope Creek [16-41-1-(0.5)a] and Mud Creek [16-41-1-10] in this watershed. The Triangle Land Conservancy (Chapter 34) also received a \$2,750,000 CWMFT grant to acquire 392 acres along the New Hope Creek Greenway. In 1998, Chapel Hill received a \$502,000 CWMFT grant to acquire 105 acres of permanent easements along Dry Creek [not indexed]. In 1999, EEP (Chapter 34) received a \$582,500 CWMFT grant to stabilize and restore 450 linear feet of Sandy Creek [16-41-1-11] in Duke Forest and to construct a bioretention areas to treat runoff from 25 acres of urban area. This grant also included restoration of 8.2 acres of bottomland hardwood wetlands in the New Hope Creek watershed.

### **5.3.3 Northeast Creek [AU # 16-41-1-17-(0.7)a, b1 and b2]**

#### 2000 Recommendations

The 2000 basin plan recommended that DWQ work with the stormwater programs to help improve water quality in Northeast Creek.

#### Current Status

Northeast Creek [16-41-1-17-(0.7)a], from US 55 to Durham Triangle WWTP (3.3 miles) is Impaired for aquatic life because the turbidity standard was violated in 15 percent of samples and the dissolved oxygen standard was violated in 11 percent of samples at sites BA197. This segment is Supporting recreation because the fecal coliform bacteria standard was not violated during intensive sampling to assess the standard at site BA197.

Northeast Creek [16-41-1-17-(0.7)b1], from Durham Triangle WWTP to Kit Creek (3.3 miles) is Impaired for aquatic life because the turbidity standard was violated in 10.3 percent of samples at site BA209. This segment is Impaired for recreation because the fecal coliform bacteria standard was violated during intensive sampling to assess the standard at site BA209.

Northeast Creek [16-41-1-17-(0.7)b2], from Kit Creek to downstream of Panther Creek (3.2 miles) is Impaired for aquatic life because the turbidity standard was violated in 15 percent of samples at site BA209. This segment is Supporting for recreation because the fecal coliform bacteria standard was not violated during intensive sampling at site BA209.

DWQ developed a fecal coliform bacteria TMDL that was approved by EPA in September 2003. The TMDL recommended a 90 percent reduction in bacteria loading from urban stormwater in Durham (Chapter 35).

**2005 Recommendations**

DWQ will continue to monitor Northeast Creek. DWQ will work with Durham stormwater services where possible to help reduce the impacts of stormwater and to reduce bacteria loading by 90 percent. Further recommendations to protect streams in urbanizing areas and to restore streams in existing urban areas are discussed in Chapter 31.

All three segments will remain on the 303(d) list. TMDLs (Chapter 35) will be developed for identified stressors within 8-13 years of listing.

**5.3.4 Third Fork Creek [AU # 16-41-1-12-(1) and (2)]**

**2000 Recommendations**

The 2000 basin plan recommended that DWQ continue to monitor Third Fork Creek to determine the impacts of development in the watershed.

**Current Status**

Third Fork Creek [16-41-1-12-(1)], from source to 2.0 miles upstream of NC 54 (5.2 miles) is Not Rated on an evaluated basis because Brenntag Southeast Incorporated (NC0086827) failed whole effluent toxicity (WET) tests five times during the last two years of the assessment period. The facility is in the headwaters of Third Fork Creek and instream impacts of these failures could not be assessed. Chemical leaching at Brenntag may be a potential source of toxicity.

Third Fork Creek [16-41-1-12-(2)], from 2.0 miles upstream of NC 54 to New Hope Creek (3.9 miles) is Impaired for aquatic life because the turbidity standard was violated in 12 percent of samples collected at site BA178 during the assessment period. This segment is Not Rated for recreation because the fecal coliform bacteria screening criteria were exceeded at site BA178.

A TMDL (Chapter 35) was approved in January 2005 for total suspended solids that recommended a 56 percent reduction in TSS mostly from the Durham stormwater system.

**2005 Recommendations**

DWQ will continue to monitor Third Fork Creek. DWQ will work with Durham stormwater services where possible to help reduce the impacts of stormwater. DWQ will determine if intensive sampling is needed to assess the fecal coliform bacteria standard in this creek (Appendix X). The NPDES compliance process will be used to address the significant permit violations noted above.

Segment 16-41-1-12-(2) will be added to the 303(d) list. TMDLs (Chapter 35) will be developed for identified stressors within 8-13 years of listing.

## **5.4 Status and Recommendations for Waters with Noted Impacts**

The surface waters discussed in this section are not Impaired. However, notable water quality problems and concerns have been documented for some waters based on this assessment. While these waters are not Impaired, attention and resources should be focused on these waters to prevent additional degradation or facilitate water quality improvement. Waters in the following section are identified by assessment unit number (AU#). See overview for more information on AU#s.

### **5.4.1 Beaver Creek [AU# 16-41-10-(0.5)]**

#### *Current Status and 2005 Recommendations*

Beaver Creek, from NC 55 to SR 1141 (6.0 miles) was not assigned a use support rating during this assessment period. Beaver Creek drains urbanized areas in and around Apex and is likely impacted by runoff. Further recommendations to protect streams in urbanizing areas and to restore streams in existing urban areas are discussed in Chapter 31.

#### *Water Quality Initiatives*

The Town of Apex (Chapter 34) received a \$387,000 CWMTF grant to acquire 43.2 acres of riparian flood plain to add to 81.6 acres already owned by the town as part of a greenway system.

### **5.4.2 Cub Creek [AU # 16-41-2-10-(0.5)]**

#### *Current Status and 2005 Recommendations*

Cub Creek, from the source to downstream of SR 1008 (8.0 miles) is currently Not Rated for aquatic life on an evaluated basis because Cole Park Plaza (NC0051314) had significant violations of surfactant permit limits, which could have adversely impacted aquatic life in the creek. Compliance issues at this facility have not been ongoing. The NPDES compliance process will continue to be used to address significant permit violations.

### **5.4.3 White Oak Creek [AU# 16-41-6-(0.3) and (0.7)]**

#### *Current Status and 2005 Recommendations*

White Oak Creek, from source to NC 751 (9.6 miles) is Not Rated for aquatic life a benthic community rating could not be assigned at site BB314 because the stream dries in summer months. The benthic community was impacted by 2002 drought conditions. The upper portions of White Oak Creek drain urbanized in Cary. Further recommendations to protect streams in urbanizing areas and to restore streams in existing urban areas are discussed in Chapter 31.

#### *Water Quality Initiatives*

The Town of Cary (Chapter 34) requires 100-foot buffers on all USGS mapped perennial and intermittent streams. The buffer requirements will help minimize water quality impacts in the White Oak Creek watershed as development proceeds. In 2000, Cary (Chapter 34) received an \$86,000 CWMTF grant to produce a greenway feasibility study in the White Oak Creek watershed. In 2001, Cary received a \$1,084,000 CWMTF grant to purchase conservation easements along 197 acres of White Oak Creek to be part of a greenway system.

## **5.5 Additional Water Quality Issues within Subbasin 03-06-05**

The following section discusses issues that may threaten water quality in the subbasin that are not specific to particular streams, lakes or reservoirs. The issues discussed may be related to waters near certain land use activities or within proximity to different pollution sources.

### **5.5.1 Jordan Haw River Watershed Nutrient Sensitive Waters Strategy**

All land uses and discharges of wastewater and stormwater in subbasin 03-06-05 potentially contribute nutrients to Jordan Reservoir in subbasins 03-06-04 and 03-06-05. The reservoir is Impaired for aquatic life because chlorophyll  $\alpha$  violated the standard in all segments of the reservoir. Refer to Chapter 36 for more information on this strategy.

## Section B - Chapter 2

### Neuse River Subbasin 03-04-02

**Crabtree Creek, Walnut Creek, Swift Creek and Marks Creek**

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#### 2.1 Subbasin Overview

##### ***Subbasin 03-04-02 at a Glance***

###### **Land and Water Area**

Total area:	726 mi <sup>2</sup>
Land area:	724 mi <sup>2</sup>
Water area:	2mi <sup>2</sup>

###### **Population Statistics**

2000 Est. Pop.: 547,580 people  
Pop. Density: 808 persons/mi<sup>2</sup>

###### **Land Cover (percent)**

Forest/Wetland:	53.5
Surface Water:	0.7
Urban:	29.5
Cultivated Crop:	13.1
Pasture/	
Managed Herbaceous:	3.0

###### **Counties**

Durham, Franklin, Johnston and Wake

###### **Municipalities**

Raleigh, Wake Forest, Cary, Garner, Clayton, Smithfield and Knightdale

Population growth in this subbasin is one of the highest in the state. Population density is the highest in the basin (1,600-3,200 persons/mi<sup>2</sup>). The largest urbanized area is in the northern portion of the subbasin around Raleigh and Cary. New development can be seen in all areas of the subbasin, but especially along the I-40/Hwy 70 corridors and US 64 corridor.

There are 19,345 acres of managed public lands in this subbasin, with Umstead Park and Schenk Forest being the largest. There are also smaller parks and several greenways in this subbasin.

There are 52 NPDES wastewater discharge permits in this subbasin with a permitted flow of 87 MGD (Figure B-2). The largest are Raleigh Neuse WWTP (60 MGD, map #154), Central Johnston WWTP (4.5 MGD, map #96), Cary North WWTP (12 MGD, map #172), Little Creek WWTP (1.9 MGD, map #129) and Wake Forest WWTP (2.4 MGD, map #191). There are also five individual NPDES stormwater permits in the subbasin. Refer to Appendix I for identification and more information on individual NPDES permit holders. Raleigh has a Phase I stormwater permit, and Cary, Apex, Garner, Durham

County and Wake County will be required to develop a stormwater program under Phase II (page 76). Smithfield and Johnston County, and the above communities, have also submitted model stormwater ordinances as required by the Neuse NSW strategy stormwater rules (page 64). Issues related to compliance with permit conditions are discussed below in Part 2.3 or Part 2.4 for impaired waters and in Part 2.5 for other waters. There are also nine registered animal operations in this subbasin.

There were 17 benthic macroinvertebrate community samples and five fish community samples (Figure B-2 and Table B-4) collected in 2000 as part of basinwide monitoring. Six sites improved, 13 sites remained the same, and two sites had lower bioclassifications. One site was monitored for the first time. There were also 30 special study samples collected in the subbasin during the assessment period. Data were collected from nine ambient monitoring stations as well.

**Figure B-2 Neuse River Subbasin 03-04-02**

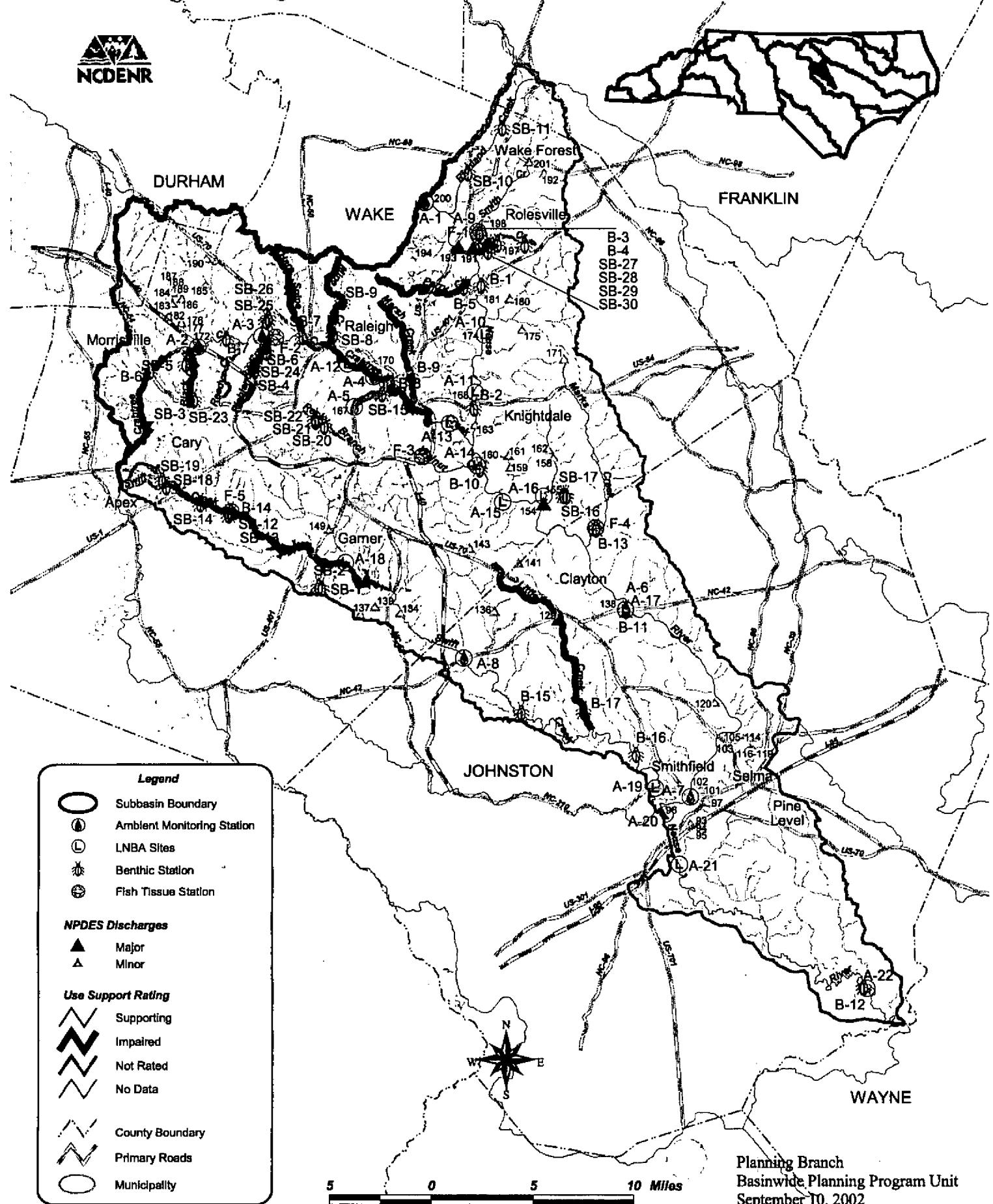


Table B-4 DWQ Monitoring Locations in Subbasin 03-04-02

Benthic Macroinvertebrate Community Monitoring Sites					
Map # <sup>1</sup>	Waterbody	County	Location	1995	2000
B-1	Neuse R <sup>2</sup>	Wake	US 401	Good-Fair	Good-Fair
B-2	Neuse R <sup>2</sup>	Wake	US 64	Good-Fair	Good-Fair
B-3	Smith Cr <sup>2</sup>	Wake	SR 2045	Good-Fair	Fair
B-4	Toms Cr <sup>2</sup>	Wake	SR 2044	Fair	Fair
B-5	Perry Cr	Wake	SR 2006	Fair	Fair
B-6	Crabtree Cr <sup>2</sup>	Wake	NC 54	Poor	Poor
B-7	Crabtree Cr <sup>2</sup>	Wake	Umstead Park	Good-Fair	Good-Fair
B-8	Crabtree Cr <sup>2</sup>	Wake	US 1	Fair	Fair
B-9	Marsh Cr <sup>2</sup>	Wake	near US 1	Fair	Poor
B-10	Walnut Cr <sup>2</sup>	Wake	SR 2551	Fair	Good-Fair
B-11	Neuse R <sup>2</sup>	Johnston	NC 42	Good-Fair	Good
B-12	Neuse R <sup>2</sup>	Johnston	SR 1201	Good	Good
B-13	Marks Cr <sup>2</sup>	Johnston	SR 1714	Good-Fair	Good-Fair
B-14	Swift Cr <sup>2</sup>	Wake	SR 1152	Fair	Fair
B-15	Swift Cr	Johnston	SR 1555	Good-Fair	Good-Fair
B-16	Swift Cr <sup>2</sup>	Johnston	SR 1501	Good	Good
B-17	Little Cr <sup>2</sup>	Johnston	SR 1562	Fair	Fair
SB-1	UT Swift Cr	Wake	Developed area	---	Poor
SB-2	UT SwiftCr	Wake	Control site	---	Good
SB-3	Swift CR	Wake	ab US 1 in MacGregor Center in park	---	Poor
SB-4	Richlands Cr	Wake	off Reedy Creek Rd; Raleigh	---	Fair
SB-5	Black Cr	Wake	Weston Parkway	---	Fair
SB-6	Richlands Cr	Wake	SR 1649	---	Fair
SB-7	Haresnipe Cr	Wake	US 70; nr Crabtree	---	Poor
SB-8	Mine Cr	Wake	Off N Hills Dr; Raleigh	---	Poor
SB-9	MineCr	Wake	1 mile ab lake	---	Fair
SB-10	Richland Cr	Wake	US 1	---	Good-Fair
SB-11	Richland Cr	Wake	SR 1931	---	Good-Fair
SB-12	Speight Cr	Wake	SR 1385	---	Not Rated
SB-13	Swift CR	Wake	SR 1152; Holly Springs Rd	---	Fair
SB-14	Swift CR	Wake	SR 1300; Hemlock Bluffs	---	Poor
SB-15	Pigeon House Cr	Wake	Fenton St; Raleigh	---	Poor
SB-16	UT Poplar Cr	Wake	ab WWTP nr SR 2509	---	Not Rated
SB-17	UT Poplar Cr	Wake	ab SR 2509	---	Not Rated
SB-18	Swift CR	Wake	McKenan Rd ab Williams Cr	---	Not Rated
SB-19	Williams Cr	Wake	ab US 64 in MacGregor West	---	Not Rated
SB-20	Rocky Br	Wake	nr Pullen Road	---	Not Rated
SB-21	Rocky Br	Wake	Dan Allen Drive	---	Not Rated
SB-22	RockyBr	Wake	Gorman Street	---	Not Rated
SB-23	Swift CR	Wake	ab US 1 in MacGregor Center in park	---	Not Rated

SB-24	Reedy Cr	Wake	Umstead State Park	---	Not Rated
SB-25	UT Turkey Cr	Wake	be Delta Ridge; at temporary road crossing	---	Not Rated
SB-26	UT TurkeyCr	Wake	ab Delta Ridge	---	Not Rated
SB-27	UT Toms Cr	Wake	SR 2044	---	Not Rated
SB-28	Toms Cr	Wake	off powerline trail	---	Not Rated
SB-30	Toms Cr	Wake	Toms Cr above the package plant discharge for Deerchase subdivision on Kimbel Rd	---	Not Rated

#### Fish Community Monitoring Sites

Map # <sup>1</sup>	Waterbody	County	Location	1995	2000
F-1	Smith Cr	Wake	SR 2045	Good-Fair	Excellent
F-2	Crabtree Cr	Wake	SR 1664	---	Excellent
F-3	Walnut Cr <sup>2</sup>	Wake	SR 2544	Fair	Good-Fair
F-4	Marks Cr <sup>2</sup>	Johnston	SR 1714	Good	Excellent
F-5	Swift Cr	Wake	SR 1152	Poor	Fair/Good-Fair

#### Ambient Monitoring Sites

Map # <sup>1</sup>	Waterbody	County	Location	Station #	Noted Parameters <sup>3</sup>
A-1	Neuse River	Wake	nr Falls Lake	J1890000	none
A-2	Crabtree Creek	Wake	SR 1795	J2850000	none
A-3	Crabtree Creek	Wake	SR 1649	J3000000	none
A-4	Crabtree Creek	Wake	SR 2000	J3251000	none
A-5	Pigeon House Cr	Wake	Dortch St	J3300000	none
A-6	Neuse River	Johnston	SR 1004	J4170000	none
A-7	Neuse River	Johnston	Smithfield	J4370000	none
A-8	Swift Cr	Johnston	NC 42	J4510000	none
A-9 <sup>4</sup>	Smith Creek	Wake	SR 2045	J2230000	none
A-10 <sup>4</sup>	Neuse River	Wake	SR 2215	J2330000	none
A-11 <sup>4</sup>	Neuse River	Wake	Milburnie Dam	J2360000	none
A-12 <sup>4</sup>	Crabtree Creek	Wake	Lassiter Mill Dam	J3210000	none
A-13 <sup>4</sup>	Crabtree Creek	Wake	New Hope Road	J3470000	none
A-14 <sup>4</sup>	Walnut Creek	Wake	SR2551	J3970000	none
A-15 <sup>4</sup>	Neuse River	Wake	SR 2555	J4050000	none
A-16 <sup>4</sup>	Poplar Creek	Wake	SR 2049	J4080000	none
A-17 <sup>4</sup>	Neuse River	Johnston	NC 42	J4170000	none
A-18 <sup>4</sup>	Swift Creek	Wake	SR 1152	J4414000	DO
A-19 <sup>4</sup>	Swift Creek	Johnston	NC 210	J4590000	none
A-20 <sup>4</sup>	Middle Creek	Johnston	Near Smithfield	J5030000	none
A-21 <sup>4</sup>	Black Creek	Johnston	Near Smithfield	J5190000	none
A-22 <sup>4</sup>	Neuse River	Johnston	SR 1201	J5250000	none

<sup>1</sup> B = benthic macroinvertebrates; F = fish community; A = ambient monitoring station; SB = benthic macroinvertebrates special study site; and SF = fish community special study site.

<sup>2</sup> Historical data available at this site. Refer to Appendix II.

<sup>3</sup> Parameters are noted if in excess of state standards in greater than 10 percent of all samples.

<sup>4</sup> LNBA Sites (page 220). Only dissolved oxygen, chlorophyll *a* and fecal coliform were analyzed.

Refer to 2001 Neuse River Basinwide Assessment Report at <http://www.esb.enr.state.nc.us/bar.html> and Section A, Chapter 3 for more information on monitoring.

Use support ratings are summarized in Part 2.2 below. Recommendations, current status and future recommendations for waters that were impaired in 1998 are discussed in Part 2.3 below. Current status and future recommendations for newly impaired waters are discussed in Part 2.4 below. Supporting waters with noted water quality impacts are discussed in Part 2.5 below. Water quality issues related to the entire subbasin are discussed in Part 2.6. Unless otherwise noted, all discussions are for the aquatic life and secondary recreation use support category. Refer to Appendix III for a complete list of monitored waters by use support category and more information on supporting monitored waters.

## 2.2 Use Support Summary

Use support ratings (page 54) in subbasin 03-04-02 were assigned for aquatic life and secondary recreation, fish consumption, primary recreation and water supply. All waters in the subbasin are considered impaired on an evaluated basis because of fish consumption advisories (page 93). All water supply waters are supporting on an evaluated basis based on reports from DEH regional water treatment consultants.

There were 243 stream miles (47 percent) and 1,065 reservoir acres (95 percent) monitored during this assessment period in the aquatic life and secondary recreation use support category. Approximately 68 (28 percent) of the monitored stream miles are impaired. Refer to Table B-5 for a summary of use support ratings by use support category for waters in the subbasin. Use support ratings for waters that were monitored and impaired in at least one use support category or were impaired in 1998 are presented in Table B-6.

Table B-5 Summary of Use Support Ratings by Use Support Category in Subbasin 03-04-02

Use Support Rating	Basis	Aquatic Life and Secondary Recreation	Fish Consumption	Primary Recreation	Water Supply
Supporting	Monitored	163.5 mi 1,036.5 ac	0	12.2 mi 90.6 ac	0
	All Waters	163.5 mi 1,036.5 ac	0	12.2 mi 90.6 ac	130.8 mi 1,089.5 ac
Impaired	Monitored	<b>68.3 mi</b>	0	0	0
	All Waters	68.3 mi	512.3 mi 1,396.7 ac	0	0
Not Rated	Monitored	10.9 mi 28.8 ac	0	0	0
No Data	N/A (No Data)	269.5 mi 331.4 ac	0	14.6 mi 216.6 ac	0
Total	Monitored	242.8 mi 1,065.3 ac	0	12.2 mi 90.6 ac	0
	All Waters	512.3 mi 1,396.7 ac	512.3 mi 1,396.7 ac	26.7 mi 307.2 ac	130.8 mi 1,089.5 ac
	Percent Monitored	47.4% mi 76.3% ac	0%	45.7% mi 29.5% ac	0%

Note: All waters include monitored, evaluated and waters that were not assessed.

Table B-6 Previously or Currently Impaired Waters in Subbasin 03-04-02

Name	1998 Status	2002 Status	Use Support Category	Miles
Black Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	3.6
Crabtree Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	16.0
Hare Snipe Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	4.5
Little Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	11.4
Marsh Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	6.2
Mine Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	4.7
Perry Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	4.9
Pigeon House Branch	Impaired	Impaired	Aquatic Life/Secondary Recreation	2.9
Richlands Creek	Supporting	Impaired	Aquatic Life/Secondary Recreation	4.7
Swift Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	7.9
Toms Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	1.5
Walnut Creek	Impaired	Supporting/Not Rated	Aquatic Life/Secondary Recreation	N/A
<b>Total 2002 Impaired Miles</b>				<b>68.3</b>

## **2.3 Status and Recommendations of Previously Impaired Waters**

### **2.3.1 Black Creek**

#### *1998 Recommendations*

Black Creek was partially supporting from the source to Crabtree Creek. It was recommended that the City of Raleigh address urban runoff impacts to this stream.

#### *Current Status*

Black Creek (3.6 miles) is currently impaired because of a Fair bioclassification at site SB-5. Habitat degradation from urban runoff is a likely cause of impairment.

#### *2002 Recommendations*

DWQ will continue monitoring Black Creek. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Black Creek. Because of the water quality impairment noted above, Black Creek is a NCWRP targeted local watershed (page 203).

The impaired biological community in Black Creek is typical of streams that run through urban areas. As with Crabtree Creek and the other creeks draining urban Raleigh and Cary, great efforts will be needed to reduce impacts from urban runoff. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

### **2.3.2 Crabtree Creek**

#### *1998 Recommendations*

Crabtree Creek was not supporting from the source to I-40 and partially supporting and fully supporting from Highway 70 to the Neuse River. It was recommended that Cary and Raleigh address the stormwater impacts to Crabtree Creek. Development has continued in the Crabtree Creek watershed.

#### *Current Status*

Crabtree Creek (5.1 miles) from the source to Lake Crabtree is currently impaired because of a Poor bioclassification at site B-6. This segment is affected by urban runoff from Cary. From the Cary WWTP outfall to Hair Snipe Creek (14 miles), the creek is supporting because of a Good-Fair and Excellent bioclassifications at two sites in Umstead State Park (B-7 and F-2) indicating recovery of water quality through the undeveloped parkland. These sites are downstream of Cary WWTP and Crabtree Lake. The ambient monitoring station (A-3) in the park detected elevated turbidity and iron, indicating erosion of soils most likely from upstream construction sites and streambank erosion. From Hair Snipe Creek to 2.8 miles upstream of the Neuse River (10.9 miles), Crabtree Creek is impaired because of a Fair bioclassification at site B-8. This segment drains the highly urbanized watersheds of Raleigh. The ambient monitoring station (A-4) also detected elevated turbidity and iron. All the monitored tributaries to Crabtree Creek received Poor or Fair bioclassifications. Habitat degradation (page 89) is a likely cause of the impaired biological communities in these segments of Crabtree Creek.

#### 2002 Recommendations

DWQ will continue monitoring Crabtree Creek. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Crabtree Creek. DWQ will continue to support the City of Raleigh stormwater programs. Because of the water quality impairment noted above, Crabtree Creek is a NCWRP targeted local watershed (page 203).

The impaired biological community in Crabtree Creek is typical of streams that run through urban areas. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

As can be seen by the water quality improvement in Umstead Park, undisturbed land with little impervious surface area can help to maintain aquatic habitats and the integrity of the biological community.

#### Current Water Quality Initiatives

The City of Raleigh has established the Capital Area Greenway (page 214) on segments of Crabtree Creek that will help to preserve buffers along the mainstem of the creek and provide recreational opportunities.

The Neuse River Foundation (page 214) has been monitoring the mouth of Crabtree Creek to investigate sediment and nutrient loading from the Crabtree Creek watershed into the Neuse River.

### **2.3.3 Hair Snipe Creek**

#### 1998 Recommendations

Hair Snipe Creek was partially supporting from the source to Crabtree Creek. It was recommended that the City of Raleigh address urban runoff impacts to this stream.

#### Current Status

The bioclassification of Hair Snipe Creek has dropped to Poor at site SB-7, indicating increased impacts from urban runoff. Hair Snipe Creek (4.5 miles) is currently impaired because of the Poor bioclassification, likely because of habitat degradation and urban runoff.

#### 2002 Recommendations

DWQ will continue monitoring Hair Snipe Creek. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Hair Snipe Creek. Because of the water quality impairment noted above, Hair Snipe Creek is a NCWRP targeted local watershed (page 203).

The impaired biological community in Hair Snipe Creek is typical of streams that run through urban areas. As with Crabtree Creek and the other creeks draining urban Raleigh and Cary, great efforts will be needed to reduce impacts from urban runoff. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

### **2.3.4 Little Creek**

#### 1998 Recommendations

Little Creek was partially supporting from the source to Swift Creek. It was recommended that a more detailed study of the watershed be undertaken to determine possible causes of impairment.

#### Current Status

Little Creek (11.4 miles) is currently impaired because of a Fair bioclassification at site B-17. This stream has a noted lack of habitat, but may be improving as indicated by the presence of more intolerant macroinvertebrates than in previous monitoring. Little Creek drains the rapidly urbanizing watershed west of Clayton and may be impacted by development in the area.

#### 2002 Recommendations

Little Creek watershed is under high development pressure. Sedimentation and erosion control plans should be followed during construction to minimize impacts to Little Creek and its tributaries. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Little Creek. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

### **2.3.5 Marsh Creek**

#### 1998 Recommendations

Marsh Creek was not supporting from the source to Crabtree Creek. It was recommended that the City of Raleigh address urban runoff impacts to this stream.

#### Current Status

The bioclassification of Marsh Creek has dropped to Poor at site B-9, indicating increased impacts from urban runoff. Marsh Creek (6.2 miles) is currently impaired because of the Poor bioclassification most likely because of habitat degradation from urban runoff.

#### 2002 Recommendations

DWQ will continue monitoring Marsh Creek. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Marsh Creek. Because of the water quality impairment noted above, Marsh Creek is a NCWRP targeted local watershed (page 203).

The impaired biological community in Marsh Creek is typical of streams that run through urban areas. As with Crabtree Creek and the other creeks draining urban Raleigh and Cary, great efforts will be needed to reduce impacts from urban runoff. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

### **2.3.6 Mine Creek**

#### *1998 Recommendations*

Upper Mine Creek was partially supporting, and Lower Mine Creek to Crabtree Creek was not supporting. It was recommended that the City of Raleigh address urban runoff impacts to this stream.

#### *Current Status*

Mine Creek (4.7 miles) from source to Crabtree Creek is currently impaired because of Poor and Fair bioclassifications at sites SB-8 and SB-9. Habitat degradation from urban runoff is the most likely cause of impairment in this stream.

#### *2002 Recommendations*

DWQ will continue monitoring Mine Creek. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Mine Creek. Because of the water quality impairment noted above, Mine Creek is a NCWRP targeted local watershed (page 203).

The impaired biological community in Mine Creek is typical of streams that run through urban areas. As with Crabtree Creek and the other creeks draining urban Raleigh and Cary, great efforts will be needed to reduce impacts from urban runoff. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

### **2.3.7 Perry Creek**

#### *1998 Recommendations*

Perry Creek was partially supporting from the source to the Neuse River. No specific recommendations were made for Perry Creek in the 1998 basinwide plan.

#### *Current Status*

Perry Creek (4.9 miles) is currently impaired because of a Fair bioclassification at site B-5. Habitat degradation from urban runoff is the most likely cause of impairment.

#### *2002 Recommendations*

Perry Creek is in an urbanizing area of Wake County. DWQ will continue monitoring Mine Creek. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Perry Creek. Because of the water quality impairment noted above, Perry Creek is a NCWRP targeted local watershed (page 203).

The impaired biological community in Perry Creek is typical of streams that run through urban areas. As with Crabtree Creek and the other creeks draining urban Raleigh and Cary, great efforts will be needed to reduce impacts from urban runoff. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

### **2.3.8 Pigeon House Branch**

#### 1998 Recommendations

Pigeon House Branch was not supporting from the source to Crabtree Creek. It was recommended that the City of Raleigh address urban runoff impacts to this stream.

#### Current Status

Pigeon House Branch (2.9 miles) is currently impaired because of a Poor bioclassification at site SB-15. Habitat degradation from urban runoff is the most likely cause of impairment. At the ambient monitoring station (A-5), the geometric mean of fecal coliform bacteria was 900 colonies/100ml water. This stream drains downtown Raleigh and is under parking lots or large roadways for much of its length.

#### 2002 Recommendations

DWQ will continue monitoring Pigeon House Branch. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Pigeon House Branch. Because of the water quality impairment noted above, Pigeon House Branch is a NCWRP targeted local watershed (page 203).

The impaired biological community in Pigeon House Branch is typical of streams that run through urban areas. As with Crabtree Creek and the other creeks draining urban Raleigh and Cary, great efforts will be needed to reduce impacts from urban runoff. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

### **2.3.9 Swift Creek (including Williams Creek)**

#### 1998 Recommendations

Upper Swift Creek and Williams Creek were not supporting from their sources to Lake Wheeler. Swift Creek was partially supporting from Lake Wheeler to Lake Benson and fully supporting to the Neuse River. It was recommended that no new discharges be permitted into the creek.

#### Current Status

Upper Swift Creek and Williams Creek are currently not rated because these segments are too small to assign bioclassifications. Swift Creek (5.5 miles) from the confluence with Williams Creek to Lake Wheeler is currently impaired because of Poor and Fair bioclassifications at sites SB-3 and B-14.

Between Lake Wheeler and Lake Benson (2.4 miles), Swift Creek is also impaired because dissolved oxygen (site A-18) was below 4 mg/l in 10.1 percent of samples. Swift Creek is being investigated by the Watershed Assessment and Restoration Project (WARP) (page 213). Above Lake Wheeler, Swift Creek is adversely impacted by stormwater runoff from urban and developing areas of Raleigh and Cary.

#### 2002 Recommendations

DWQ will continue monitoring Swift Creek. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment

in Swift Creek. DWQ will use the information in the WARP report on Swift Creek to develop recommendations to restore water quality in Swift Creek.

The impaired biological community in Swift Creek is typical of streams that run through urban areas. As with Crabtree Creek and the other creeks draining urban Raleigh and Cary, great efforts will be needed to reduce impacts from urban runoff. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

Lower Swift Creek, below the Lake Wheeler Dam, is being studied for preservation by the Triangle Land Conservancy. Because of the water quality impairment noted above and the preservation efforts, lower Swift Creek is a NCWRP targeted local watershed (page 203).

#### *Current Water Quality Initiatives*

There is Wake County Parks and Recreation and CWMTF restoration project (page 218) in the Swift Creek watershed. The Triangle Land Conservancy (page 219) has prepared a conservation assessment for the Conservation Trust for North Carolina (page 218) that identifies preservation and restoration opportunities in Swift Creek and the adjacent Neuse River watershed.

### **2.3.10 Toms Creek**

#### *1998 Recommendations*

Toms Creek was partially supporting from the source to the Neuse River. No specific recommendations were made for Toms Creek in the 1998 basinwide plan.

#### *Current Status*

Toms Creek (1.5 miles) from Browns Lake to the Neuse River is currently impaired because of a Fair bioclassification at site B-4. Toms Creek was investigated by the Watershed Assessment and Restoration Project (WARP) (page 213) in 2001. The watershed assessment was valuable in defining the extent of impairment in Toms Creek and in determining the causes of impairment. Extensive monitoring completed during the project determined that high chlorine levels in the Deerchase WWTP (map #197) discharge and habitat degradation from high stormwater flows in the lower part of the creek are responsible for the impairment.

#### *2002 Recommendations*

In order to restore the biological community in Toms Creek, the discharger problems need to be addressed, and then aquatic habitat will need to be restored below the dam at Browns Lake. DWQ will work with Deerchase WWTP to reduce impacts to Toms Creek related to the discharge. Current NSW riparian buffer rules (page 64) and the NSW and NPDES Phase II (page 76) stormwater rules need to be fully enforced to prevent increased habitat degradation in Toms Creek. Because of the water quality impairment noted above and the current assessment efforts, Toms Creek is a NCWRP targeted local watershed (page 203).

### **2.3.11 Walnut Creek**

#### 1998 Recommendations

Walnut Creek was partially supporting from Lake Johnson to Lake Raleigh and from I-440 to the Neuse River. The segment between these was not supporting. It was recommended that no new discharges be permitted into the creek.

#### Current Status

Increases in bioclassification to Good-Fair at two sites below Lake Raleigh (B-10 and F-3) indicate some improvement in water quality lower on Walnut Creek. This segment is currently supporting because of the increased bioclassifications; however, there was noted habitat degradation with infrequent pools and riffles and indications of scour from high storm flows. The segments above I-440 are currently not rated because there was no monitoring, and the area drains heavily urbanized portions of Cary and Raleigh. Past benthic macroinvertebrate bioclassifications have been Poor upstream of site F-3. Upper Walnut Creek is heavily impacted from urban runoff.

#### 2002 Recommendations

Although water quality in Walnut Creek appears to be improving in the lower segments, the watershed drains urbanized and urbanizing areas of Raleigh and Cary and the potential for degradation of instream habitat is very high. DWQ will reestablish a biological monitoring station above Lake Raleigh and Lake Johnson to better assess impacts from stormwater runoff. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

There are currently two NCWRP restoration projects ongoing in the Walnut Creek watershed (page 213) designed to stabilize streambanks and reduce sedimentation. Because of the water quality impairment noted above and the current restoration projects, Walnut Creek is a NCWRP-targeted local watershed (page 203).

## **2.4 Status and Recommendations for Newly Impaired Waters**

### **2.4.1 Richlands Creek**

#### Current Status

Richlands Creek was fully supporting but threatened in 1998, but is currently impaired (4.7 miles) because of two Fair bioclassifications in 1996 at sites SB-4 and SB-6. Habitat degradation from urban runoff is the most likely cause of impairment. Intensive grading and road building activity in this watershed, related to construction of the Raleigh Entertainment and Sports Arena (RESA), is likely to have increased habitat degradation.

#### 2002 Recommendations

DWQ will continue monitoring Richlands Creek. As part of the 303(d)-list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Richlands Creek. The NCWRP is initiating a riparian buffer restoration and streambank stabilization project on Richlands Creek at the RESA. Because of the water quality impairment

noted above and the current restoration efforts, Richlands Creek is a NCWRP targeted local watershed (page 203).

The impaired biological community in Richlands Creek is typical of streams that run through urban areas. As with Crabtree Creek and the other creeks draining urban Raleigh and Cary, great efforts will be needed to reduce impacts from urban runoff. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

## **2.5 Status and Recommendations for Waters with Noted Impacts**

The surface waters discussed in this section are supporting designated uses (unless otherwise noted) based on DWQ's use support assessment and are not considered to be impaired. However, notable water quality problems and concerns have been documented for some waters based on this assessment. While these waters are not considered impaired, attention and resources should be focused on these waters to prevent additional degradation or facilitate water quality improvement.

### **2.5.1 Reedy Creek**

#### *Current Status and 2002 Recommendations*

Reedy Creek was not rated in 1998 and is currently not rated. Site SB-24 did not meet the necessary criteria to assign a bioclassification. The watershed drains urbanizing portions of Raleigh. Refer to page 81 for a description of urban stream problems and recommendations for reducing impacts and restoring water quality.

### **2.5.2 Rocky Branch**

#### *Current Status and 2002 Recommendations*

Rocky Branch is currently not rated. Sites SB-20, 21 and 22 did not meet the necessary criteria to assign bioclassifications. The watershed is in a heavily urbanized area of west Raleigh and runs through NCSU campus. Stream habitat is degraded, and the benthic macroinvertebrate community is heavily impacted from urban runoff. The stream is currently undergoing a large-scale restoration project funded in part by CWMTF (page 210).

### **2.5.3 Lake Crabtree**

#### *Current Status and 2002 Recommendations*

Lake Crabtree has constantly high turbidity, most likely from urban runoff and development in the watershed. The watershed drains urban Cary and Raleigh-Durham International Airport. Lake Crabtree may actually help downstream water quality by processing sediment and nutrients and reducing turbidity. There was a blue green algal bloom in the lake in August 1999. DWQ will continue to monitor the lake to evaluate any future degradation in water quality.

Lake Crabtree (518 ac) is classified for and is supporting primary recreation based on a lake assessment completed in summer of 2000. Fecal coliform bacteria levels were well below the water quality standard for primary recreation.

## **2.5.4 Reedy Creek Lake, Big Lake and Sycamore Lake**

### *Current Status and 2002 Recommendations*

Reedy Creek Lake, Big Lake and Sycamore Lake have had problems with *Hydrilla*. The watersheds drain mostly forested areas of Umstead State Park. There are indications of increased nutrient loading to the lakes as development increases in the watershed areas just outside of the park boundaries. DWQ will continue to monitor these lakes to evaluate any future degradation in water quality that may be associated with development in these watersheds.

## **2.5.5 Apex Lake**

### *Current Status and 2002 Recommendations*

Apex Lake watershed has undergone dramatic development since 1995. Nutrient and sediment loading to the lake are increasing as a result of this development. Because of the rapid changes in land use in this watershed, DWQ will continue to monitor this lake to evaluate any future degradation in water quality that may be associated with development.

## **2.5.6 Lake Wheeler**

### *Current Status and 2002 Recommendations*

Lake Wheeler is an important recreational lake as well as a future Raleigh water supply. There are safety and pollution concerns related to the use of powerboats on the lake. There have been high levels of manganese detected in the lake, and *Hydrilla* infestations have also been a problem. Because of the rapid changes in land use in this watershed, DWQ will continue to monitor this lake to evaluate any future degradation in water quality that may be associated with development.

## **2.5.7 Lake Benson**

### *Current Status and 2002 Recommendations*

Lake Benson is a future Raleigh water supply. There have been high levels of manganese detected in the lake, and *Hydrilla* infestations have also been a problem. Because of the rapid changes in land use in this watershed, DWQ will continue to monitor this lake to evaluate any future degradation in water quality that may be associated with development.

## **2.5.8 Marks Creek**

### *Current Status and 2002 Recommendations*

Marks Creek is in rapidly developing areas of Wake and Johnston counties. There was logging noted at sites B-13 and F-4. Adherence to and enforcement of riparian buffer and stormwater rules will help to protect Marks Creek as this watershed is developed. Because of the water quality impacts noted above, the increasing development pressure and the availability of a conservation assessment in the watershed, Marks Creek is a NCWRP targeted local watershed (page 203).

The Triangle Land Conservancy (page 219) has prepared a conservation assessment for the Conservation Trust for North Carolina (page 218) that identifies preservation and restoration opportunities in Marks Creek and the adjacent Neuse River watershed (page 214).

### **2.5.9 Neuse River Bottomlands**

#### *Current Status and 2002 Recommendations*

This section of the Neuse River is currently supporting based on a Good bioclassification at site B-12. This segment of the Neuse River is the best watershed for preservation in the upper Neuse River basin. More than 50 percent of the entire basin population live upstream of this site. This area has extensive wetlands and will be an important area to preserve to protect downstream water quality. The Neuse River floodplain broadens out to four miles wide through this area as it transitions from the piedmont to the coastal plain. This watershed has several Natural Heritage sites and has been prioritized by Johnston County as its most impressive natural area. The NCWRP has targeted this local watershed (page 203).

### **2.5.10 Richland Creek**

#### *Current Status and 2002 Recommendations*

Richland Creek is in a rapidly developing area near Wake Forest. Two sites on Richland Creek had Good-Fair bioclassifications. Adherence to and enforcement of riparian buffer and stormwater rules will help to protect Richland Creek as this watershed is developed. Because of the increasing development pressure, this watershed is a NCWRP targeted local watershed (page 203).

## **2.6 Additional Water Quality Issues Within Subbasin 03-04-02**

This section discusses issues that may threaten water quality in the subbasin that are not specific to particular streams, lakes or reservoirs. The issues discussed may be related to waters near certain land use activities or within proximity to different pollution sources.

### **2.6.1 Water Quality Threats to Streams in Urbanizing Watersheds**

Most of the streams in this subbasin that are not already impaired from urban stormwater runoff are threatened by development pressure throughout this subbasin. In order to prevent aquatic habitat degradation and impaired biological communities, protection measures must be put in place immediately. Refer to page 81 for a description of urban stream water quality problems and recommendations for reducing impacts to and restoring water quality in these waters.

### **2.6.2 Wake County Watershed Task Force**

Local governments have increasingly become involved in water quality issues within their jurisdictions. Wake County is centered in one of the most intensely developed subbasins in North Carolina. Wake County is engaged in a process to protect and restore water quality to streams in the county (page 218).



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## TIN DIOXIDE

### PRODUCT IDENTIFICATION

CAS NO.	18282-10-5
EINECS NO.	242-159-0
FORMULA	SnO <sub>2</sub>
MOL WT.	150.69

### H.S. CODE

### TOXICITY

SYNOMYS Cassiterite; Stannic anhydride; Tin (IV) oxide; Stannic oxide; Zinndioxid; Dióxido de estano; Dioxyde d'etain; Tin peroxide; Flowers of Tin;

### DERIVATION

### CLASSIFICATION

### PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE white powder

MELTING POINT 1127 C

BOILING POINT

SPECIFIC GRAVITY 6.95

SOLUBILITY IN WATER Insoluble (soluble in concentrated sulfuric acid)

pH

VAPOR DENSITY

REFRACTIVE INDEX

NFPA RATINGS Health: 1; Flammability: 0; Reactivity: 0

AUTOIGNITION

FLASH POINT

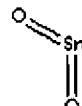
STABILITY Stable but will oxidise to Stannic Oxide on prolonged exposure

### GENERAL DESCRIPTION & APPLICATIONS

Tin compounds are classified into two main groups; inorganic-tin and organo-tin compounds. The organo-tin compounds are defined as compounds in which at least one tin-to-carbon bond exist. But the inorganic-tin compounds do not contain carbon as the principal element. Inorganic-tin compounds are relatively simple in their molecular structure and, like tin itself, are not considered to be toxic. Tin atoms can replace carbon atoms in chemical compounds, and a great variety of organo-tin compounds are known.

### INORGANIC TIN COMPOUNDS

The largest use for inorganic tin compounds is in electrolytes for plating tin and tin alloys. The more important plating chemicals are chlorides, sulfates, and fluoroborates in acidic electrolytes and stannates in alkaline solutions. Chemically, tin exhibits valencies of 2 and 4. Inorganic-tin compounds are divided into two series: stannous, or tin(II), compounds which contain tin as a quadrivalent element, whereas stannic, or tin(IV), compounds containing tin as a bivalent element. It resists attack by water but is dissolved by strong acids and alkalis. One of common compounds of tin(II) are stannous chloride (SnCl<sub>2</sub>) used in tin galvanizing, as a reducing agent in the manufacture of polymers and as a mordant in dyeing.; stannous oxide (SnO) employed in making tin salts for chemical reagents and for plating; and stannous



fluoride ( $\text{SnF}_2$ ) is the additive in fluoride tooth-pastes. Inorganic tin chemicals are used as catalysts in a number of industrial processes. stannous octoate is the catalyst that produces the foaming action that turns the liquid plastic into a foam-like solid structure in the manufacture of polyurethane foam. Tin(IV) compounds of significance include stannic chloride ( $\text{SnCl}_4$ ) is widely used as a stabilizer for perfumes and as a starting material for other tin salts; and stannic oxide( $\text{SnO}_2$ ) is a useful catalyst in certain industrial processes and a polishing powder for steel. Tin sulfide is used as a bronzing agent for wood colouring

### ORGANOTIN COMPOUNDS

The greatest use of di-organotin compounds is stabilizers in the manufacture of polyvinyl chloride, or PVC. The particular importance of these di-organotins lies in their outstanding ability to preserve the clarity and transparency of PVC, not only when being processed but also in subsequent service. Organotin-stabilized PVC is used in water pipes and in food packaging applications as tin compounds used in these applications are known as nontoxic. In contrast to the nontoxic compounds employed as stabilizers, some tri-organotin compounds (e.g., tributyl- and triphenyltins) are powerful biocides and have found use in a number of relevant applications, such as fungicides bactericide in underwater and anti-fouling paints, preservatives for wood, textile, paper, leather, and glass, and hospital and veterinary disinfectants. The tributyltin family of chemicals include bis (tributyltin) oxide, or tributyltin oxide itself, tributyltin sulfide, bis (tributyltin) adipate, tributyltin methacrylate, tributyltin fluoride, and tributyltin acetate. Tributyltin derivatives have toxic properties to gram positive bacteria are used as disinfectants on surfaces such as hospital floors and sports arenas, combined with gram negative bactericides. Tin chemicals also used as flame retardants to treat fabrics and plastics.

### SALES SPECIFICATION

APPEARANCE	white to gray powder
CONTENT ( $\text{SnO}_2$ )	99.0% min
METAL IMPURITY	0.1% max
TRANSPORTATION	
PACKING	50kgs drum
HAZARD CLASS	8 (Packing Group: II)
UN NO.	1838

### OTHER INFORMATION

European Hazard Symbols: , Risk Phrases: , Safety Phrases: 24/25

### STANNIC & STANNOUS COMPOUNDS

Chemically, tin exhibits valencies of 2 and 4. Inorganic-tin compounds are divided into two series: stannous, or tin(II), compounds which contain tin as a quadrivalent element, whereas stannic, or tin(IV), compounds containing tin as a bivalent element.

- STANNIC CHLORIDE [ $\text{SnCl}_4$  , CAS RN: 7646-78-8 (Anhydrous), 10025-69-1 (Dihydrate)]: a caustic liquid; soluble in water (decomposes in hot water), alcohol, carbon disulfide and turpentine oil; boiling point 114 c; toxic and corrosive if inhaled or spilled on the skin; used as an intermediate in the manufacture of organo-tin compounds ; in soaps as a colour and perfume stabilizer and bacteria and fungi control; as a catalyst in the polymerisation of styrene; textile finishing; glass: strengthening; electroconductive and electroluminescent surface coatings; manufacture of fuchsin, colour lakes, ceramics; stabilizer for resins; manufacture of blue print and other sensitized papers; also known as tin chloride; tin tetrachloride.
- STANNIC OXIDE [ $\text{SnO}_2$  ,CAS RN: 18282-10-5]: a white powder compound; insoluble in water, soluble in concentrated sulfuric acid; melting point 1127 C; found in nature as the mineral cassiterite, or prepared by the reaction between tin and concentrated nitric acid at high temperatures; used as a polishing agent for glass, metals, and metallic dental restorations, and as a catalyst; also known as flowers of tin; stannic

acid; stannic anhydride; tin dioxide; tin oxide; tin peroxide.

- STANNIC BROMIDE [SnBr<sub>4</sub>, CAS RN: 7789-67-5]: a white crystalline compound; soluble in water and alcohol; melting point 31 C; fumed when exposed to air; used in mineral separations.; also known as tin tetrabromide.
- STANNIC CHROMATE [Sn(CrO<sub>4</sub>)<sub>2</sub>]; a yellow to brownish toxic crystals; slightly soluble in water; used as a polishing agent for porcelain and china.
- STANNIC IODIDE [SnI<sub>4</sub>, CAS RN: 7790-47-8] a yellow to reddish crystals; decomposes in water, soluble in alcohol, ether, chloroform, carbon disulfide, and benzene; melt point 144 C; sublime at 180 C; also known as tin tetraiodide.
- STANNIC SULFIDE [SnS<sub>2</sub>, CAS RN: 1315-01-1]: a yellow to brown powder; insoluble in water, soluble in alkaline sulfides; decomposes at red heat; used as a pigment and for imitation gilding. Also known as artificial gold; mosaic gold; tin bisulfide.
- TIN DICHLORIDE BIS(2,4-PENTANEDIONATE) [SnC<sub>10</sub>H<sub>14</sub>Cl<sub>2</sub>O<sub>4</sub>, CAS RN: 16919-46-3]
- TIN (IV) PHTHALOCYANINE DICHLORIDE [CAS RN: 18253-54-8]
- TIN(IV) ACETATE [SnC<sub>8</sub>H<sub>12</sub>O<sub>8</sub>, CAS RN: 2800-96-6]: Tetraacetoxytin
- TIN(IV)T-BUTOXIDE [SnC<sub>16</sub>H<sub>36</sub>O<sub>4</sub>, CAS RN: 36809-75-3]
- DI-N-BUTYL TIN(IV) DICHLORIDE [SnC<sub>16</sub>H<sub>36</sub>O<sub>4</sub>, CAS RN: 683-18-1]: Dibutyltin dichloride
- TIN (IV) METHACRYLATE [SnC<sub>16</sub>H<sub>20</sub>O<sub>8</sub>, CAS RN: 69064-21-7]
- TIN(IV) FLUORIDE [SnF<sub>4</sub>, CAS RN: 7783-62-2]: Tin tetrafluoride
- TIN(IV) BROMIDE [SnBr<sub>4</sub>, CAS RN: 7789-67-5]: Tin tetrabromide
- STANNIC PHOSPHIDE
- STANNOUS CHLORIDE [SnCl<sub>2</sub>, CAS RN: 7772-99-8 (anhydrous), 7772-99-8 (dihydrate)]: a white crystal; soluble in water, alcohol, and alkalies; melting point 247 C; used as lube oil additive; tin galvanizing and as a reducing agent in the manufacture of polymers and dyes and printing textiles; in the manufacture of stannous salts (particularly the oxide, sulphate, octoate and 2- ethyl hexotate); in manufacture of pharmaceuticals and fine chemicals as a reducing agent; as a reducing agent in the extraction and purification of precious metals; surface sensitizer prior to silvering in the manufacture of mirrors; electroplating;
- STANNOUS FLUORIDE [SnF<sub>2</sub>, CAS RN: 7783-47-3]: used topically to the teeth as a dental caries prophylactic; Also known as tin difluoride.
- STANNOUS PYROPHOSPHATE [Sn<sub>2</sub>P<sub>2</sub>O<sub>7</sub>, 15578-26-4]: a diagnostic aid used in bone imaging. Tin (II) pyrophosphate.
- SODIUM STANNATE [Na<sub>2</sub>SnO<sub>3</sub>, CAS RN: 12058-66-1 (Anhydrous) 12209-98-2 (Trihydrate) 12027-70-2 (Hexahydroxide)]: white crystals; insoluble in water, alcohol; used as a salt in alkaline tin plating electrolyte; used in surface coatings (paper), in manufacturing other metallic stannates and tin oxide coatings; also known as preparing salt.
- STANNOUS 2-ETHYLHEXOATE [Sn(C<sub>8</sub>H<sub>15</sub>O<sub>2</sub>)<sub>2</sub>, CAS RN: 301-10-0]: a yellow liquid; soluble in benzene, toluene, and petroleum ether; used as a lubricant, a vulcanizing agent, and a stabilizer for transformer oil.
- STANNOUS BROMIDE [SnBr<sub>2</sub>, CAS RN: 10031-24-0]: a yellowish powder; soluble in water, alcohol, acetone, ether, and dilute hydrochloric acid; darken on exposure on air; melting point 215C; also known as tin dibromide.
- STANNOUS CHROMATE [SnCrO<sub>4</sub>]: a brown powder; slightly soluble in water; used to make porcelain and glass; also known as tin chromate.
- STANNOUS FLUORIDE [SnF<sub>2</sub>, CAS RN: 7783-47-3]: a white, lustrous powder; slightly soluble in water; used to fluoridate toothpaste and as a medicine; also known as tin difluoride.
- STANNOUS METHANESULFONATE [Sn(CH<sub>3</sub>SO<sub>3</sub>)<sub>2</sub>, CAS RN: 53408-94-9]; electroplating chemical

- STANNOUS OXALATE [SnC<sub>2</sub>O<sub>4</sub>, CAS RN: 814-94-8, 17480-26-1]: a white crystalline powder; decomposes at 280 C; soluble in acids; used in textile dyeing and printing; also known as tin oxalate.
- STANNOUS OXIDE [SnO, CAS RN: 21651-19-4] a black powder; insoluble in water, soluble in acids and strong bases; decomposes when heated; unstable in air; used as a reducing agent and chemical intermediate, and for glass plating; also known as tin protoxide.
- STANNOUS SULFATE [SnSO<sub>4</sub>, CAS RN: 7488-55-3]: white to yellowish crystalline powder; decomposes rapidly in water; losing SO<sub>2</sub> at 360 C; used for dyeing and tin plating; also known as tin sulfate.
- STANNOUS SULFIDE [SnS, CAS RN: 1314-95-0]: a dark crystals; insoluble in water, decomposes in concentrated hydrochloric acid; melt point 880 C; used as an analytical reagent and catalyst, and in bearing material; also known as tin monosulfide
- BARIUM STANNATE [BaO<sub>3</sub>Sn, CAS RN: 12009-18-6]
- CALCIUM STANNATE [CaO<sub>3</sub>Sn, CAS RN: 12013-46-6]
- COPPER (II) STANNATE [CuO<sub>3</sub>Sn, CAS RN: 12019-07-7]
- LEAD STANNATE, DIHYDRATE [H<sub>4</sub>O<sub>5</sub>PbSn, CAS RN: 12036-31-6]
- ZINC STANNATE [CuO<sub>3</sub>Sn, CAS RN: 12036-37-2]
- SODIUM STANNATE [Na<sub>2</sub>O<sub>3</sub>Sn, CAS RN: 12058-66-1 12209-98-2 {Trihydrate}]
- POTASSIUM STANNATE TRIHYDRATE [H<sub>6</sub>K<sub>2</sub>O<sub>6</sub>Sn, CAS RN: 12142-33-5]
- STRONTIUM STANNATE [SrO<sub>3</sub>Sn, CAS RN: 12143-34-9]
- COBALT(II) STANNATE DIHYDRATE [CoH<sub>4</sub>O<sub>5</sub>Sn, CAS RN: 1345-19-3]
- SODIUM TRIFLUOROSTANNATE [NaF<sub>3</sub>Sn, CAS RN: 13782-22-4]
- AMMONIUM HEXACHLOROSTANNATE(IV) [H<sub>8</sub>N<sub>2</sub>Cl<sub>6</sub>Sn, CAS RN: 16960-53-5]
- LITHIUM HEXAFLUOROSTANNATE(IV) [Li<sub>2</sub>F<sub>6</sub>Sn, CAS RN: 17029-16-21]

We are pleased to receive your any questions or remarks. You may contact us at the following numbers and e-mail address for additional information.

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