

Biological Assessment of

SCM Glidco Organics Corp.

Duval County

NPDES #FL0000884

Sampled 27 November 1990

June 1991

Biology Section
Division of Administrative and Technical Services

Introduction

SCM Glidco Organics Corporation is located at 601 Crestwood Street in Jacksonville. The plant produces various flavor and perfume compounds from turpentine. An industrial waste permit (#I016-119611) was issued for the operation of a 5.0 MGD industrial wastewater treatment facility. Sources of wastewater within the plant include spill retention areas, contaminated stormwater, boiler blowdown/softener blowdown, cooling tower blowdown, cooling water discharges, and steam condensate discharges. Treatment is primarily accomplished with an oil skimmer. Cooling sprays are recirculated. Effluent is discharged to Moncrief Creek which flows into Trout River and then to the St. Johns River. A flowfield is utilized for retention and disposal of uncontaminated stormwater.

Upon review of the monthly operating report (MOR) data, SCM Glidco has had several violations with respect to specific permit conditions, monitoring requirements, effluent limitations, and surface water quality standards. These violations, along with NPDES violations, occur frequently (see table in Appendix). The problem parameters tend to be copper, oil and grease, phenolics, and chlorine residual.

SCM Glidco is apparently attempting to rectify the problems with copper, total residual chlorine (chlorination was eliminated in July 1990), and phenolics. The company admits that compliance with oil and grease limitations cannot be achieved with the treatment equipment currently in place.

Several problems with SCM's bioassay monitoring program have been noted, including invalid tests (May 1989), use of resistant organisms (*Cyprinodon variegatus*), and failure to report test results to DER.

Methods

The focus of this investigation was to determine the discharger's effects on the receiving waters. A comparison of biological community health was made between a control site (located in Moncrief Creek about 400 meters upstream of the outfall) and a test site (about 400 meters downstream of the discharge). A habitat assessment was performed *in situ* to establish comparability between sites. Supplemental physical/chemical data were also collected on the effluent and study sites. Acute screening toxicity bioassays, using *Ceriodaphnia dubia* and *Notropis leedsi* as test organisms, were performed on an effluent sample (Peltier and Weber 1985, FDER 1985). The effluent was analyzed for organic constituents (base neutrals, acid extractables, and pesticide extractables) and metals. Additionally, nutrient analyses were performed on effluent, and samples from reference and test sites. Methods used for all chemical analyses are on file at the Tallahassee DER Chemistry Laboratory.

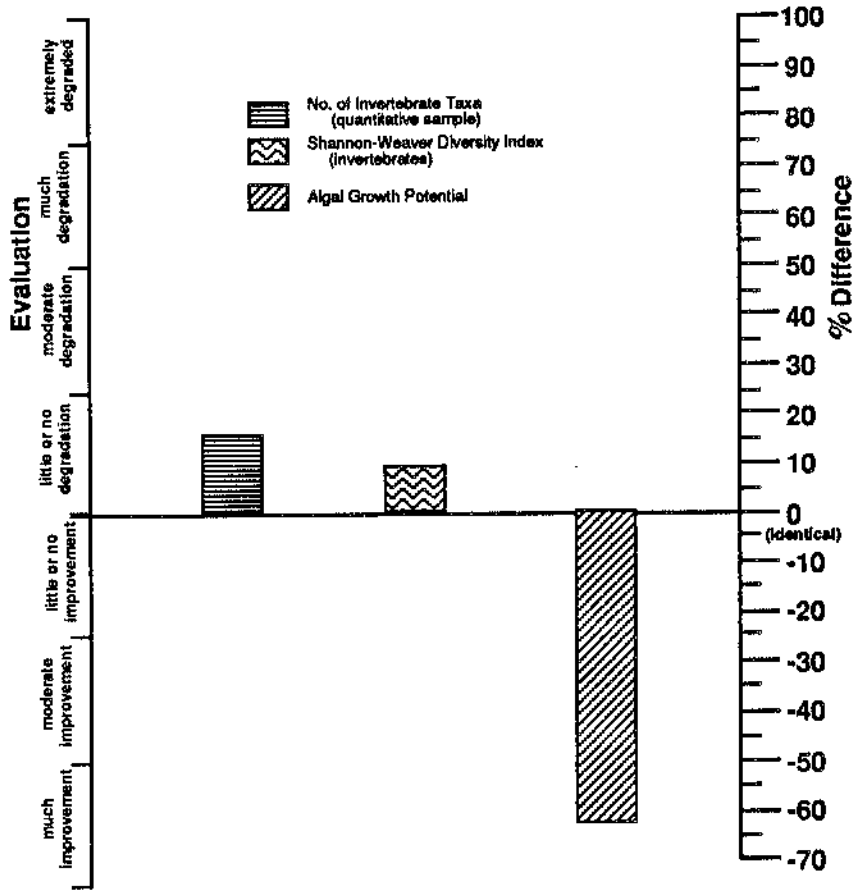
Benthic macroinvertebrate communities were evaluated at reference and test sites. Collection methods consisted of three petite ponar grabs per site (Ross 1990). Bacterial populations were analyzed for total and fecal coliforms following the methods of APHA (1989). Algal Growth Potential tests, using *Duneliella tertiolecta* as the test organism, followed EPA (1974). Sediment from reference and test sites was analyzed for grain size and percent organic matter (Ross 1990).

Explanation of Measurements of Community Health

Several different measurements of macroinvertebrate and algal

Major characteristics of community structure of control and test sites.

	Control Site	Test Site
Macroinvertebrate Ponar		
Number of Taxa	6	5
Florida Index	0	0
Shannon-Weaver Diversity	2.0	1.7
% Oligochaeta	19.0	3.1
% Diptera	0	3.1
% Decapoda	4.8	0
% Malacostraca	4.8	0
% Polychaeta	71.4	93.8
% Collector-Gatherers	78.9	48.1
% Predators	21.2	50.1
% Shredders	0	1.8
Algal Growth Potential (mg dry wt/l)	16.5	6.1



Effect of discharge on receiving stream
(measured as difference between control and test sites).

community health have been employed. Many of these, such as the number of taxa and Shannon-Weaver Diversity Index are well known. Others are briefly explained here. The determination of the Quantitative Stability Index (for taxonomic % composition) is a two step process. First, the relative proportions of major taxonomic groups are calculated for each site. Then, the lesser of the two percentages for each discrete taxonomic group is totaled. A QSI (% composition) of 100% means that the two sites being compared are identical. This same type of procedure is used for calculating the QSI (functional feeding groups).

For graphical purposes, the percent differences between the control and test sites involving the number of taxa and the diversity index are measured as the control site minus test site divided by the control site. The percent difference between sites involving algal growth potential is measured as the test site minus control site divided by the control site.

The following personnel were involved in this investigation: Scott Bulgrin (DER Northeast District) and Lyn Burton, Russel Frydenborg, Kathleen Lurding, and Sandra McClure (Tallahassee Biology Laboratory).

Results and Discussion

The portion of Moncrief Creek studied during this investigation can best be characterized as a low-energy, *Spartina* and *Juncus* dominated, tidal creek. Salinity was 17‰ throughout the reach studied. The creek was fairly adequately oxygenated (above 7.0 mg/l at the surface and above 5.9 mg/l at the bottom) with a pH (7.7) typical of such estuarine areas (Appendix). Habitat quality was somewhat better at the control site (59 points); the test site was given 49 points. Due to the tidal nature of Moncrief Creek, it appears that the SCM Glidco effluent affects both sites studied. A chemical smell and oily globs were observed in water and sediments from both the control and test sites. Due to the widespread alteration and urbanization present in this watershed, an unaffected or pristine control station was not available.

The SCM Glidco effluent was acutely toxic to the fish, *Notropis leedsi*, producing complete mortality in the 100% concentration. This is a violation of the toxicity standard in 17-4.244(3)(a) FAC. The effluent was not lethal to the water fleas, *Ceriodaphnia dubia*.

Aliphatic compounds (C_{10-11}) were detected in the discharge at levels less than 10 µg/l, and probably were not responsible for the observed toxicity. No other organic constituents were measured. The metals copper (24 µg/l), lead (164 µg/l), zinc (42 µg/l), barium (15 µg/l), and iron (577 µg/l) were found in the effluent sample. The concentrations of copper, lead, and iron were in excess of their allowed ambient limits of 15 µg/l, 50 µg/l, and 300 µg/l, respectively.

Problem levels of metals (in excess of ambient criteria) which were observed in the receiving waters included copper (16 µg/) and iron (440 µg/l) at the control site and copper (57 µg/l) at the test site.

Based on a few samplings, nutrients were moderately enriched in the effluent and throughout the creek (Appendix). The highest concentration of ortho-phosphorus observed was 0.2 mg/l, 0.22 mg/l, and 0.2 mg/l in the effluent, control site, and test site samples, respectively. Total phosphorus was 0.25 mg/l upstream and 0.28 mg/l downstream of the discharge. The highest concentration of ammonia detected was 0.12 mg/l, 0.02 mg/l, and 0.19 mg/l in the effluent, the control, and test site samples, respectively. While nitrate-nitrite was below detection limits at the control site, it was present in the effluent (0.04 mg/l) and test site (0.31 mg/l) (Appendix).

Despite the higher nutrient concentrations found at the test site, algal growth potential decreased from 16.5 mg algal dry weight/l above the discharge, to 6.1 mg algal dry weight/l below the outfall. This result, along with the elevated copper found at the test site, is indicative of algal growth inhibition. Copper is known to depress algal growth at 5 µg/l (EPA Ambient Water Criteria Document).

Total coliform bacteria levels were within ambient criteria (highest observed was 850 organisms/100 ml, 1810 organisms/100 ml, and 1300 organisms/100 ml in the effluent, upstream, and downstream samples, respectively). Similarly, fecal coliform bacteria levels were within ambient limits at the upstream station (480 organisms/100 ml), in the effluent sample (130 organisms/100 ml), and at the test site (500 organisms/100 ml).

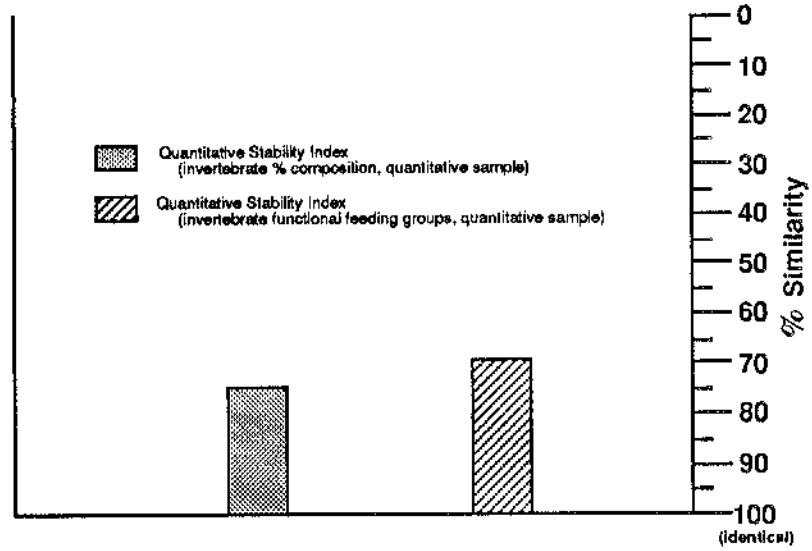
Macroinvertebrate communities were depressed at both sampling areas. Only six taxa were recovered from the control site, while five taxa were found at the test site. Diversity was also lower than expected at both sampling stations (2.0 at the control; 1.7 at the test site). In contrast, a similar yet non-anthropogenically affected station in the St. Mary's River yielded an average of 21.5 taxa with a diversity of 3.7 (Banks and Bulgrin, personal communication).

As previously mentioned, it is apparent that the SCM discharge flows upstream or downstream in Moncrief Creek, depending on the tide. This discharge, found to be acutely toxic during this investigation, is one source exerting negative influences on the biota. Additional causes of stress include contaminated stormwater from residential, urban, and other industrial areas.

Although the degree of similarities or differences in various parameters between control and test sites is usually helpful in determining a discharger's effects on the receiving waters (see graphs, pp. 2-3), the tidal nature of Moncrief Creek complicates this comparison. The biota of both sites is indicative of disturbed conditions. Although a decrease in algal growth potential is generally considered beneficial (reducing eutrophication potential), in this case, the reduction in AGP is indicative of growth inhibition, probably caused by the relatively high concentration of copper found at the test site.

Conclusions

The SCM Glidco effluent was acutely toxic to the fish, *Notropis leedsi* (i.e., a toxicity violation). The discharge was in excess of ambient numeric criteria for copper, lead, and iron. Water from the downstream site was in violation of ambient criteria for copper, while copper and iron were above allowed levels at the control site.



Effect of discharge on receiving stream
(measured as similarity between control and test sites).

Although nutrients (especially phosphorus) were moderately enriched throughout the system, AGP at the test site was inhibited, probably due to the high level of copper present. However, AGP results at both sites were indicative of cultural eutrophication.

Macroinvertebrate communities were degraded at both the control and test sites, owing to the toxic effluent and to the tidal nature of the creek (which allowed effluent to flow both ways). Non-point sources in the area may also affect the receiving waters. Due to the complications arising from multiple potential sources and the apparent widespread community stress in the area, further basin-wide assessments appear justified.

Literature Cited

American Public Health Assoc., American Water Works Assoc., and Water Pollution Control Federation. 1989. Standard Methods for the Examination of Water and Wastewater, 17th ed. New York, N.Y. 1268 p.

Environmental Protection Agency. 1974. Marine algal assay procedure: Bottle test. Nat'l Environ. Res. Center, Office of Res. and Dev., U.S. EPA, Corvallis, Oregon. 43 p.

Florida Department of Environmental Regulation. 1985. Quality assurance manual for performing acute toxicity tests. 2nd edition. Fla. Dept. Environmental Regulation, Biology Section, Tallahassee. 53 pp.

Peltier, W. H. and C. I. Weber. 1985. Methods for measuring the acute toxicity of effluents to freshwater and marine organisms. 3rd edition. EPA/600/4-85/013. U. S. EPA, Cincinnati, Ohio. 216 pp.

Ross, L. T. 1990. Methods for aquatic biology. Fla. Dept. Environ. Reg. Tech. Ser. 10(1): 1-47.


Almadale Christian Sch
CLARK ROAD
Holly Ford
Sandpit
INTERCHANGE
Burt Maxwell Boat Landing
Tollgate
TOLL BRIDGE
BR 34
Fire Sta
DELAWARE AVE
BOULEVARD
CONCORD
Lake Forest
BLVD
Park
Water Tank
BRANDYWINE
LEXINGTON DR
FOREST
RIVER
BROWARD ROAD
Lake Forest Manor
Lake Forest Sch
PICKETT ST
KENNARD Park
LUEDERS
EDGEWOOD
OAKHURST AVE
LILA
IDA
Pickett Cem
MONCRIEF CREEK
TEST SITE
DISCHARGE POINT
CONTROL SITE
North Shore Park
70TH ST
67TH
66TH
62D ST
Talbulah Park
North Shore
JACKSONVI
Norwood Sch
Norwood
Mt Bethel Ch
MONCRIEF
EXPRESSWAY
SEABOARD COAST LINE
Parking
Drive-in Theater
North Shore Sch
40'

SCM Glido Organics Company Permit Violations

Date	Parameter	Exceedance Value	Limit
Dec. 1990	pH	5.0 units	6.5 – 8.5 units
	Oil & Grease	41.40 mg/L	5.0 mg/L
	Copper	18 µg/l	15 µg/l
	Zinc	0	1.0 mg/L
	Flow	7.700 MGD	5.0 MGD
	Chlorine Residual	0	0.01 mg/L
Nov. 1990	Copper	20 µg/l	15 µg/l
Oct. 1990	Chlorine Residual	0.02 mg/L	0.01 mg/L
Aug 1990	Chlorine Residual	0	0.01 mg/L
Jul. 1990	Copper	30 µg/l	15 µg/l
	Phenol	12 µg/l	5 µg/l
Jun. 1990	Oil & Grease	11.00 mg/L	5.0 mg/L
	Phenol	20 µg/l	5 µg/l
May 1990	Oil & Grease	46.00 mg/L	5.0 mg/L
	Copper	20 µg/l	15 µg/l
	Chlorine Residual	0.03 mg/L	0.01 mg/L
Apr. 1990	Copper	80 µg/l	15 µg/l
Mar. 1990	pH	8.6 units	6.5 – 8.5 units
Feb. 1990	Copper	20 µg/l	15 µg/l
Jan. 1990	pH	8.8 units	6.5 – 8.5 units
Dec. 1989	Phenol	6 µg/l	5 µg/l
Nov. 1989	Copper	20 µg/l	15 µg/l
	Phenol	9 µg/l	5 µg/l
Sep. 1989	Copper	20 µg/l	15 µg/l
	Chlorine Residual	0.02 mg/L	0.01 mg/L
Jul 1989	Copper	27 µg/l	15 µg/l
	Chlorine Residual	0.02 mg/L	0.01 mg/L
Jun. 1989	Chlorine Residual	0.02 mg/L	0.01 mg/L
May 1989	Phenol	7 µg/l	5 µg/l
Feb. 1989	Phenol	10 µg/l	5 µg/l
Sep. 1989	Oil & Grease	42.00 mg/L	5.0 mg/L

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
MARINE BENTHIC HABITAT ASSESSMENT FIELD DATA SHEET

SUBMITTING AGENCY CODE: 2031 / SUBMITTING AGENCY NAME: Fla. D.E.R. NorthEast District	STORET STATION NUMBER:	DATE (M/D/Y): 12/03/90	RECEIVING BODY OF WATER: Moncrief Creek to TRAT RIVER TO ST. JOHNS RIVER

REMARKS: High Tide, Alot of TRASH, GARBAGE Along marsh BANK	LOCATION: Moncrief Creek, ~1/4 mile upstream of Scm Glidco Organics.	FIELD ID/NAME:

Habitat Parameter / score	Excellent	Good	Fair	Poor
Littoral Alterations 9	None—Unaltered shoreline. **9-10 points**	Mostly natural shoreline, but with occasional riprap. **6-8 points**	Shoreline consisting mostly of riprap and vertical seawalls. **3-5 points**	Shoreline consisting almost entirely of vertical seawalls. **0-2 points**
Community Types Observed ~~[illegible]~~ 28	At least four communities observed from the following list: mangrove swamp, marsh, oyster bar, grass bed, reef, saltern, natural beach, or tidal creek. **38-50 points**	Two or three comunities observed from those listed. **26-37 points**	One comunity observed from those listed. **13-25 points**	No comunities observed from those listed. **0-12 points**
Tidal Fluctuation 5	>0.75 m. **4-5 points**	0.5 - 0.75 m. **3 points**	0.25 - 0.5 m. **2 points**	<0.25 m. **0-1 point**
Freshwater Discharges/ Alterations 2	Only natural runoff.. **9-10 points**	Mostly natural runoff, but with a few, small stormwater sources. **6-8 points**	Considerable stormwater discharge from local roads, parking lots, etc. **3-5 points**	Extensive manmade discharges, especially from canals draining large tracts of land. **0-2 points**
Flow and Wave Action 8	Light to moderate wave action present except under the harshest weather conditions. Flow unrestricted by manmade structures. **9-10 points**	—	—	Heavy wave action sometimes present even during average weather conditions, or flow restricted by manmade structures so that velocities are very high. **0-2 points**
Sediment Type 7	Combination of sand, gravel, and shell. **12-15 points**	Primarily sand, with small areas of mud. **8-11 points**	Mixture of sand and mud, or well-aerated mud only. **4-7 points**	Anaerobic mud. **0-3 points**

TOTAL SCORE ~~[illegible]~~ 59

COMMENTS: Spartina and Juncus line the shoreline. Moncrief Creek is a tidal Creek with Swamp. Marsh areas along with Residential areas.

ANALYSIS DATE:	ANALYST:	SIGNATURE:
12/03/90	SCOTT BULGRIN	Scott Bulgrin

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
MARINE BENTHIC HABITAT ASSESSMENT FIELD DATA SHEET

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SUBMITTING AGENCY CODE: 8031 / SUBMITTING AGENCY NAME: Fla. Dept. Environmental Regulation	STORET STATION NUMBER:	DATE (M/D/Y): 12/04/90	RECEIVING BODY OF WATER: Moncrief Creek to TROUT RIVER TO ST. Johns River

REMARKS: High Tide, Alot of TRASH Along Marsh Bank	LOCATION: Moncrief Creek at Fork Downstream of Scm Citrus Organics	FIELD ID/NAME:

Habitat Parameter / score	Excellent	Good	Fair	Poor
Littoral Alterations: 6	None—Unaltered shoreline. **9-10 points**	Mostly natural shoreline, but with occasional riprap. **6-8 points**	**Shoreline consisting mostly of riprap and vertical seawalls. 3-5 points**	**Shoreline consisting almost entirely of vertical seawalls. 0-2 points**
Community Types Observed: 25	At least four communities observed from the following list: mangrove swamp, marsh, oyster bar, grass bed, reef, saltern, natural beach, or tidal creek. **38-50 points**	**Two or three communities observed from those listed. 26-37 points**	**One community observed from those listed. 13-25 points**	**No communities observed from those listed. 0-12 points**
Tidal Fluctuation: 5	>0.75 m. **4-5 points**	0.5 - 0.75 m. **3 points**	0.25 - 0.5 m. **2 points**	<0.25 m. **0-1 point**
Freshwater Discharges/ Alterations: 2	Only natural runoff.. **9-10 points**	Mostly natural runoff, but with a few, small stormwater sources. **6-8 points**	Considerable stormwater discharge from local roads, parking lots, etc. **3-5 points**	Extensive manmade discharges, especially from canals draining large tracts of land **0-2 points**
Flow and Wave Action: 7	Light to moderate wave action present except under the harshest weather conditions. Flow unrestricted by manmade structures. **9-10 points**	—	—	Heavy wave action sometimes present even during average weather conditions, or flow restricted by manmade structures so that velocities are very high. **0-2 points**
Sediment Type: 4	Combination of sand, gravel, and shell. **12-15 points**	Primarily sand, with small areas of mud. **8-11 points**	Mixture of sand and mud, or well-aerated mud only. **4-7 points**	Anaerobic mud. **0-3 points**

TOTAL SCORE 49

COMMENTS: Spartina and Juncus line the shoreline. Moncrief Creek is a tidal creek with Swamp-marsh areas with Residential areas.

ANALYSIS DATE:	ANALYST:	SIGNATURE:
12/04/90	SCOTT BULGRIN	Scott Bulgrin

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET

SUBMITTING AGENCY CODE: 2031 / SUBMITTING AGENCY NAME: Fla. D.E.R. NorthEast District	STORET STATION NUMBER:	DATE (M/D/Y): 12/03/90	RECEIVING BODY OF WATER: Moncrief Creek to TROUT RIVER TO ST. JOHNS RIVER

REMARKS:	LOCATION: Moncrief Creek ~ 1/4 mile upstream of SCM Glidco organics	FIELD ID/NAME:

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Surrounding Land-Use (specify relative percent in each category):

Forest	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other
			X		X	

Local Watershed Erosion (check box): None [X] Moderate [ ] Heavy [ ]

Local Watershed NPS Pollution (check box): No evidence [ ] Some potential sources [ ] Obvious sources [X]

Point-Source Pollution (list location and describe): SCM Glidco Organics Corp., Inc. NPDES # FL0000834

channel width 8 m

Estimated Stream Width (range, m): 18	Estimated Stream Depth (range, m): 2.0	yes
High Water Mark (m above bed): 0.80	Velocity (range, m/s): 0.25K	Impounded [ ] Channelized [X]

Canopy Cover % (check box): Open: [X] Lightly Shaded: [ ] Moderately Shaded: [ ] Heavily Shaded: [ ]

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: [ ] Sewage: [ ] Petroleum: [ ] Chemical: [X] Anaerobic: [ ] Other: [ ]

Sediment Oils: Absent: [ ] Slight: [X] Globs 1-2 Moderate: [ ] Profuse: [ ]

Sediment Deposits: Sludge: [ ] Paper Fiber: [ ] Mud: [/] Sand: [/] Shell: [ ] Other: [/] Detritus

Substrate Types (estimated % surface coverage):

Limestone:		Sand/Silt/Clay Mix:	
Consolidated Clay:		Clay/Silt (inorganic):	
Gravel/Shell		Coarse Organic Debris:	10 DETRITUS
Sand:	30	Mud/Muck (organic):	60

WATER QUALITY

	Temp. (°C):	D.O. (mg/l):		
Top	19.0	7.0	Secchi Depth (m):	1.0
Mid-depth	19.0	7.0	pH (SU):	7.45
Bottom	19.0	6.7	Conductivity (umho/cm):	23 800
			Other Parameters:	Salinity 17 °/oo

Stream Type (check box): Blackwater: [ ] Deep Aquifer Fed: [ ] Surficial Aquifer Fed: [ ] Alluvial: [ ] Other: [X] TIDAL

Water Odors (check box): Normal: [ ] Sewage: [ ] Petroleum: [ ] Chemical: [X] Other: [ ]

Water Surface Oils (check box): Slick: [ ] Sheen: [ ] Globs: [X] 1-2 None: [ ]

Clarity (check box): Clear: [ ] Slightly turbid: [ ] Turbid: [X] Opaque: [ ]

Color (check box): Tannic: [ ] Green (algae): [X] Slight Clear: [ ] Other: [ ]

Weather Conditions: Sunny 75° wind from East MAX. High Tide

Abundance:	Absent	Rare	Common	Abundant
Periphyton	[X] none observed	[ ]	[ ]	[ ]
Fish	[X] none observed	[ ]	[ ]	[ ]
Aquatic Macrophytes	[X]	[ ]	[ ]	[ ]
Iron/sulfur Bacteria	[X]	[ ]	[ ]	[ ]

ANALYSIS DATE: 12/03/90	ANALYST: SCOTT BULGRIN	SIGNATURE: Scott Bulgrin

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET

SUBMITTING AGENCY CODE: 8031 / SUBMITTING AGENCY NAME: Fla. D.E.R. Northeast District	STORET STATION NUMBER:	DATE (M/D/Y): 12/04/90	RECEIVING BODY OF WATER: Moncrief Creek to TRAT RIVER to St. Johns River

REMARKS:	LOCATION: Moncrief Creek at Fork downstream of SCM Glidco Organics	FIELD ID/NAME:

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Surrounding Land-Use (specify relative percent in each category):

Forest	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other
			✓		✓	

Local Watershed Erosion (check box): None [X] Moderate [ ] Heavy [ ]

Local Watershed NPS Pollution (check box): No evidence [ ] Some potential sources [ ] Obvious sources [X]

Point-Source Pollution (list location and describe): SCM Glidco Organics Corp., Inc. NPDES # FL0000884 Channel with 15 in

Estimated Stream Width (range, m): 25	Estimated Stream Depth (range, m): 2.0	yes
High Water Mark (m above bed): 0.80	Velocity (range, m/s): 0.25K	Impounded [ ] Channelized [X]

Canopy Cover % (check box): Open: [X] Lightly Shaded: [ ] Moderately Shaded: [ ] Heavily Shaded: [ ]

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: [ ] Sewage: [ ] Petroleum: [ ] Chemical: [X] Anaerobic: [ ] Other: [ ]

Sediment Oils: Absent: [ ] Slight: [X] Globs 1-2 Moderate: [ ] Profuse: [ ]

Sediment Deposits: Sludge: [ ] Paper Fiber: [ ] Mud: [/] Sand: [/] Shell: [ ] Other: [/] DETRITUS

Substrate Types (estimated % surface coverage):

Limestone:		Sand/Silt/Clay Mix:	
Consolidated Clay:		Clay/Silt (inorganic):	
Gravel/Shell		Coarse Organic Debris:	10 DETRITUS
Sand:	30	Mud/Muck (organic):	60

WATER QUALITY

	Temp. (°C):	D.O. (mg/l):		
			Secchi Depth (m):	1.1
Top	19.2	7.1	pH (SU):	7.76
Mid-depth	19.1	7.1	Conductivity (µmho/cm):	25300
Bottom	19.0	5.9	Other Parameters: SALINITY 17‰	

Stream Type (check box): Blackwater: [ ] Deep Aquifer Fed: [ ] Surficial Aquifer Fed: [ ] Alluvial: [ ] Other: [X] TIDAL Creek

Water Odors (check box): Normal: [ ] Sewage: [ ] Petroleum: [ ] Chemical: [X] Other: [ ]

Water Surface Oils (check box): Slick: [ ] Sheen: [ ] Globs: [X] 1-2 None: [ ]

Clarity (check box): Clear: [ ] Slightly turbid: [ ] Turbid: [X] Opaque: [ ]

Color (check box): Tannic: [ ] Green (algae): [X] Slight Clear: [ ] Other: [ ]

Weather Conditions: Overcast
High Tide, 50°
Wind from East

Abundance:	Absent	Rare	Common	Abundant
Periphyton	[X] none	[ ]	[ ]	[ ]
Fish	[X] Mullet observed	[ ]	[ ]	[ ]
Aquatic Macrophytes	[X]	[ ]	[ ]	[ ]
Iron/sulfur Bacteria	[X]	[ ]	[ ]	[ ]

ANALYSIS DATE: 12/04/90	ANALYST: SCOTT BULGRIN	SIGNATURE: Scott Bulgrin

Sample Number: 90-NOV-29-04-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: SE-G-W Analysis Description: Selenium in water by furnace AA

SCM VP

Storet Number	Analyte	Result	Units
01147	Selenium	20 U	ug/L

Sample Number: 90-NOV-29-04-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: W-ICP-23 Analysis Description: ICP multielement analysis for water samples

Storet Number	Analyte	Result	Units
01106	Aluminum	NR	ug/L
01002	Arsenic	NR	ug/L
01097	Antimony	NR	ug/L
01007	Barium	37	ug/L
01012	Beryllium	NR	ug/L
01027	Cadmium	NR	ug/L
00916	Calcium	NR	mg/L
01034	Chromium	10 U	ug/L
01037	Cobalt	NR	ug/L
01042	Copper	16	ug/L
01045	Iron	440	ug/L
01051	Lead	NR	ug/L
00927	Magnesium	NR	mg/L
01055	Manganese	NR	ug/L
01067	Nickel	5 U	ug/L
00937	Potassium	NR	mg/L
01147	Selenium	NR	ug/L
01077	Silver	NR	ug/L
00929	Sodium	NR	mg/L
01082	Strontium	NR	ug/L
01059	Thallium	NR	ug/L
01087	Vanadium	NR	ug/L
01092	Zinc	33	ug/L
	Comment	NONE	

A - Value reported is the mean of two or more determinations
E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practice quantiation limit
U - Material was analyzed for but not detected; The value reported is the mimimum detection limit
N/A - Not applicable NR - Not requested

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive • Tallahassee, FL 32301 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T0-14367

Received: 14 DEC 90

Dr. Yuh-Hsu Pan
DER-Chemistry Section
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Project: T129/District Samples

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION	SAMPLED BY
14367-22	8655	Client
14367-23	8656	
14367-24	8657	
14367-25	8672	
14367-26	8673	

LIQUID SAMPLES

PARAMETER	14367-22	14367-23	14367-24	14367-25	14367-26
Total Kjeldahl Nitrogen-N, mg/l	1.1	1.2	1.3	1.4	2.1
Total Phosphorus, mg/l	0.86	<0.10	<0.10	0.22	0.25

Sample Number: 90-DEC-04-11-01 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Moncrief Creek 1/4 mile upstream of SCM Glidco Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 3-DEC-1990 11:00:27.65
Comments:

Sample Number: 90-DEC-04-11-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.010 U	mg N/L

Sample Number: 90-DEC-04-11-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.020 U	mg N/L

Sample Number: 90-DEC-04-11-02 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Moncrief Creek at Moncrief Road Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 3-DEC-1990 13:00:27.65
Comments:

Sample Number: 90-DEC-04-11-02 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.17 A	mg N/L

Sample Number: 90-DEC-04-11-02 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.078 A	mg N/L

A - Value reported is the mean of two or more determinations
E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practical quantitation limit
U - Material was analyzed for but not detected; The value reported is the minimum detection limit
N/A - Not applicable NR - Not requested

Sample Number: 90-NOV-29-04-01 Sample Status: Authorized by Tim Fitzpatrick
Sample Location: Moncrief Creek ~ 1/4 mile upstream of SCM Glidco Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 28-NOV-1990 10:40:58.25
Comments:

Sample Number: 90-NOV-29-04-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: AG-G-W Analysis Description: Silver in water by furnace AA

Storet Number	Analyte	Result	Units
01077	Silver	2 U	ug/L

Sample Number: 90-NOV-29-04-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: AS-G-W Analysis Description: arsenic by graphite furnace for water samples

Storet Number	Analyte	Result	Units
01002	Arsenic	8 K	ug/L

Sample Number: 90-NOV-29-04-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: CD-G-W Analysis Description: Cadmium by graphite furnace for water samples

Storet Number	Analyte	Result	Units
01027	Cadmium	2 U	ug/L

Sample Number: 90-NOV-29-04-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: HG-H-W Analysis Description: Mercury by cold vapor using hydride sys.-water

Storet Number	Analyte	Result	Units
71900	Mercury	0.2 U	ug/L

Sample Number: 90-NOV-29-04-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: PB-G-W Analysis Description: Lead by furnace AA in water

Storet Number	Analyte	Result	Units
01051	Lead	10 U	ug/L

A - Value reported is the mean of two or more determinations
E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practice quantiation limit
U - Material was analyzed for but not detected; The value reported is the mimimum detection limit
N/A - Not applicable NR - Not requested

Sample Number: 90-DEC-04-12-01 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Moncrief Creek 1/4 mile upstream of SCM Glidco Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 3-DEC-1990 11:00:26.08
Comments:

Sample Number: 90-DEC-04-12-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-CL Analysis Description: Analysis for chloride in water

Storet Number	Analyte	Result	Units
00940	Chloride	10000 A	mg Cl/L

Sample Number: 90-DEC-04-12-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-F Analysis Description: Analysis for fluoride in water

Storet Number	Analyte	Result	Units
00951	Fluoride	0.97 A	mg F/L

Sample Number: 90-DEC-04-12-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-PO4 Analysis Description: Orthophosphate analysis for water samples

Storet Number	Analyte	Result	Units
70507	O-Phosphate-P	0.22 A	mg P/L

Sample Number: 90-DEC-04-12-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-SO4 Analysis Description: Analysis for sulfate in water

Storet Number	Analyte	Result	Units
00945	Sulfate	1200 A	mg SO4/L

A - Value reported is the mean of two or more determinations
E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practice quantiation limit
U - Material was analyzed for but not detected; The value reported is the mimimum detection limit
N/A - Not applicable NR - Not requested

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 900796 DATE: 1990/12/03
SAMPLE SOURCE: MONCRIEF CREEK TIME: 1100
STATION NUMBER: SCM VP SAMPLER: BULGRIN/HOLLINGSWORTH
STATION LOCATION: MONCRIEF CREEK 1/4 MILE UPSTREAM OF SCM GLIDCO
Fixed monitoring: State: X Special Project: Dredge & Fill:
NPDES: Intensive Survey: Response Operation:
Domestic Waste: Other:
SAMPLE SUPPORTS Compliance: X Enforcement:
FIELD MEASURMENTS

Total depth	6.0	Sample depth	3.0	Water temp. (oC)	19.8
pH	7.65	Conductivity	23800	Dissolved Oxygen	6.80
Secchi	1.0	Stream Velocity	<0.25	Salinity	17

WEATHER CONDITIONS : SUNNY

LABORATORY MEASURMENTS

PARAMETER		PARAMETER	
Turbidity (NTU)	2.8	Color (PtCo)	40
Conductivity (uMHO)	25800	pH (standard units)	7.70

The following values are in ppm.

COD	122	Oil & Grease	
CBOD		NO2 as N	
Total TKN		Total NO2+NO3 as N	
Total NH3 as N		Total NO3 as N	
Chloride		Ortho PO4 as P	
Alkalinity		Total PO4 as P	
Dissolved Oxygen	7.20	Sulfate	
BOD	3.55	Fluoride	
TOT SS	9	TOT TS	
VOL SS	4	VOL TS	
FIX SS	5	FIX TS	
Chlorophyl a		Pheophytin	

SEDIMENT VALUES ARE IN mg/Kg
ALL OTHER VALUES ARE IN ug/L

Aluminum	Arsenic	Barium
Cadmium	Calcium	Chromium
Copper	Iron	Lead
Magnesium	Manganese	Mercury
Nickel	Potassium	Selenium
Silver	Sodium	Zinc

COMMENTS:

TIDE :
SAMPLE CUSTODY

Sample Released To: GRACIE C.KENNEDY Date: 1990/12/03 Time: 1530
Preservation: ICE

Reported By : BIPIN ADHYARU Date: 1990/12/17

DEPARTMENT OF ENVIRONMENT REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 91110 DATE: 1990/12/03
SAMPLE SOURCE: MONCRIEF CREEK TIME: 1100
STATION NUMBER: SAMPLER: BULGRIN/HOLLINGSWORTH
STATION LOCATION: MONCRIEF 1/4 MILE UPSTREAM SCM CORP.
Fixed monitoring: Special Project: Dredge & Fill:
Intensive Survey: Response Operation:
Other: POINT SOURCE COMPLIANCE
PARAMETERS PERFORMED
Natural Substrate: Qualitative: Sediment(grain size):
Bacteria: X Other:

FIELD MEASURMENTS
ph: Conductivity: Dissolved oxygen: Temperature(C):
Secchi: Total depth(ft.):

WEATHER CONDITIONS: PARTLY CLOUDY AND WARM

The following were analyzed by: Date out:
Sample depth (ft.) :
Species Diversity Index:
Quantitative # of taxa :
Density (#/m2) :
Qualitative # of taxa :
Florida Biotic Index :

The following were analyzed by: MIKE HOLLINGSWORTH Date out: 1990/12/06
All vaules reported in #/100mL

Total coliform (MF)	: 420M	Total coliform (MPN):	
Fecal coliform (MF)	: 380	Fecal coliform (MPN):	
Fecal strep (MF)	:	Fecal strep (MPN):	
Heterotrophic Plate #/mL	:	Enterococci (MF)	: 120e

MF : Membrane Filter
MPN: Most Probable Number (Tubes)
M : Moderate non-coliform growth
T: Too Numerous To Count n-c growth
C: Confluent (Heavy) n-c growth
e: Estimate count outside acpt. range

The following were analyzed by: Date out:
Sediment particle size % weight
Sample depth (ft.):
>2.0mm :
1.0 - 2.0mm :
0.5 - 2.0mm :
0.25 - 0.5mm :
0.125 - 0.5mm :
0.125 - 0.25mm :
0.0625 - 0.125mm :
<0.0625mm :
Sediment organic :

COMMENTS: HIGH TIDE

Approved By : LEE BANKS Date: 1990/12/18

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Received: 14 DEC 90

Dr. Yuh-Hsu Pan
DER-Chemistry Section
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Project: T129/District Samples

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
14367-56	8911	Client
14367-57	8912	
14367-58	8913	
14367-59	9058	
14367-60	9059	

Sum up

PARAMETER	14367-56	14367-57	14367-58	14367-59	14367-60
Total Kjeldahl Nitrogen-N, mg/l	2.9	1.2	<0.10	0.24	0.16
Total Phosphorus, mg/l	0.25	0.19	<0.10	<0.10	<0.10

UPSTREAM SCM

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 900790 DATE: 1990/11/28
SAMPLE SOURCE: MONCRIEF CREEK TIME: 1040
STATION NUMBER: SAMPLER: BULGRIN
STATION LOCATION: MONCRIEF CREEK 1/2 MILE UPSTREAM OF SCM GLIDCO
Fixed monitoring: State: Special Project: Dredge & Fill:
NPDES: Intensive Survey: Response Operation:
Domestic Waste: Other: IW
SAMPLE SUPPORTS Compliance: X Enforcement:
FIELD MEASURMENTS

Total depth	3	Sample depth	1	Water temp. (oC)	23
pH	7.10	Conductivity	11000	Dissolved Oxygen	4.5
Secchi	0.6	Stream Velocity	0.5	Salinity	8

WEATHER CONDITIONS : OUTGOING TIDE

LABORATORY MEASURMENTS

PARAMETER		PARAMETER	
Turbidity (NTU)	5.4	Color (PtCo)	40
Conductivity (uMHO)	10200	pH (standard units)	7.41

The following values are in ppm.

COD	44	Oil & Grease	
CBOD		NO2 as N	
Total TKN		Total NO2+NO3 as N	
Total NH3 as N		Total NO3 as N	
Chloride		Ortho PO4 as P	
Alkalinity		Total PO4 as P	
Dissolved Oxygen	6.1	Sulfate	
BOD	2.95	Fluoride	
TOT SS	8	TOT TS	
VOL SS	4	VOL TS	
FIX SS	4	FIX TS	
Chlorophyl a		Pheophytin	

SEDIMENT VALUES ARE IN mg/Kg
ALL OTHER VALUES ARE IN ug/L

Aluminum	Arsenic	Barium
Cadmium	Calcium	Chromium
Copper	Iron	Lead
Magnesium	Manganese	Mercury
Nickel	Potassium	Selenium
Silver	Sodium	Zinc

COMMENTS:

TIDE
SAMPLE CUSTODY

Sample Released To: GRACIE C.KENNEDY Date: 1990/11/28 Time: 1400
Preservation: ICE

Reported By BIPIN ADHYARU Date: 1990/12/03

DEPARTMENT OF ENVIRONMENT REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 91109 DATE: 1990/11/28
SAMPLE SOURCE: MONCRIEF CREEK TIME: 1040
STATION NUMBER: SAMPLER: BULGRIN
STATION LOCATION: 1/4 MI. UPSTREAM OF SCM GLIDCO CORP.
Fixed monitoring: Special Project: Dredge & Fill:
Intensive Survey: Response Operation:
Other: PSC
PARAMETERS PERFORMED
Natural Substrate: Qualitative: Sediment(grain size):
Bacteria: X Other:

FIELD MEASURMENTS
ph: 7.10 Conductivity: 11,000 Dissolved oxygen: 4.50 Temperature(C): 23.0
Secchi: 0.6 Total depth(ft.): 3.0

WEATHER CONDITIONS:

The following were analyzed by: Date out:
Sample depth (ft.) :
Species Diversity Index:
Quantitative # of taxa :
Density (#/m2) :
Qualitative # of taxa :
Florida Biotic Index :

The following were analyzed by: MIKE HOLLINGSWORTH Date out: 1990/11/29
All vaules reported in #/100mL

Total coliform (MF)	: 1,810Te	Total coliform (MPN):	
Fecal coliform (MF)	: 480	Fecal coliform (MPN):	
Fecal strep (MF)	:	Fecal strep (MPN):	
Heterotrophic Plate #/mL	:	Enterococci (MF) :	

MF : Membrane Filter
MPN: Most Probable Number (Tubes)
M : Moderate non-coliform growth
T: Too Numerous To Count n-c growth
C: Confluent (Heavy) n-c growth
e: Estimate count outside acpt. range

The following were analyzed by: Date out:
Sediment particle size % weight
Sample depth (ft.):
)2.0mm :
1.0 - 2.0mm :
0.5 - 2.0mm :
0.25 - 0.5mm :
0.125 - 0.5mm :
0.125 - 0.25mm :
0.0625 - 0.125mm :
(0.0625mm :
Sediment organic :

COMMENTS: OUTGOING TIDE

Approved By : LEE BANKS Date: 1990/12/04

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 900784 DATE: 1990/11/27
SAMPLE SOURCE: SCM GLIDCO EFFLUENT TIME: 1100
STATION NUMBER: SAMPLER: BULGRIN/SIEBOLD/WRIGHT
STATION LOCATION: SCM GLIDCO CORP
Fixed monitoring: State: X Special Project: Dredge & Fill:
NPDES: Intensive Survey: Response Operation:
Domestic Waste: Other:
SAMPLE SUPPORTS Compliance: X Enforcement:
FIELD MEASURMENTS

Total depth:		Sample depth	:	Water temp. (oC):	31.3
pH	: 8.03	Conductivity	: 690	Dissolved Oxygen:	3.5
Secchi	:	Stream Velocity:		Salinity	: <1

WEATHER CONDITIONS :

LABORATORY MEASURMENTS

PARAMETER		PARAMETER	
Turbidity (NTU)	: 3.2	Color (PtCo)	: 15
Conductivity (uMHO)	: 529	pH (standard units)	: 7.30

The following values are in ppm.

COD	: 26	Oil & Grease	:
CBOD	:	NO2 as N	:
Total TKN	:	Total NO2+NO3 as N	:
Total NH3 as N	:	Total NO3 as N	:
Chloride	:	Ortho PO4 as P	:
Alkalinity	:	Total PO4 as P	:
Dissolved Oxygen	:	Sulfate	:
BOD	: 9	Fluoride	:
TOT SS	: 3	TOT TS	:
VOL SS	: 2	VOL TS	:
FIX SS	: 1	FIX TS	:
Chlorophyl a	:	Pheophytin	:

SEDIMENT VALUES ARE IN mg/Kg
ALL OTHER VALUES ARE IN ug/L

Aluminum	:	Arsenic	:	Barium	:
Cadmium	:	Calcium	:	Chromium	:
Copper	:	Iron	:	Lead	:
Magnesium	:	Manganese	:	Mercury	:
Nickel	:	Potassium	:	Selenium	:
Silver	:	Sodium	:	Zinc	:

COMMENTS:

TIDE :
SAMPLE CUSTODY

Sample Released To: GRACIE C.KENNEDY Date: 1990/11/28 Time: 0730
Preservation: ICE

Reported By : BIPIN ADHYARU Date: 1990/12/17

DEPARTMENT OF ENVIRONMENT REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 91105 DATE: 1990/11/27
SAMPLE SOURCE: SCM GLIDCO CORP. TIME: 1100
STATION NUMBER: SAMPLER: BULGRIN/SIEBOLD
STATION LOCATION: EFFLUENT
Fixed monitoring: Special Project: Dredge & Fill:
Intensive Survey: Response Operation:
Other: PSC
PARAMETERS PERFORMED
Natural Substrate: Qualitative: Sediment(grain size):
Bacteria: X Other:

FIELD MEASURMENTS
ph: 8.03 Conductivity: 690 Dissolved oxygen: 3.5 Temperature(C): 31.
Secchi: Total depth(ft.):

WEATHER CONDITIONS:

The following were analyzed by: Date out:
Sample depth (ft.) :
Species Diversity Index:
Quantitative # of taxa :
Density (#/m2) :
Qualitative # of taxa :
Florida Biotic Index :

The following were analyzed by: MIKE HOLLINGSWORTH Date out: 1990/11/29
All vaules reported in #/100mL

Total coliform (MF)	: 850Te	Total coliform (MPN):	
Fecal coliform (MF)	: 130Te	Fecal coliform (MPN):	
Fecal strep (MF)	:	Fecal strep (MPN):	
Heterotrophic Plate #/mL	:	Enterococci (MF) :	

MF : Membrane Filter T: Too Numerous To Count n-c growth
MPN: Most Probable Number (Tubes) C: Confluent (Heavy) n-c growth
M : Moderate non-coliform growth e: Estimate count outside acpt. range

The following were analyzed by: Date out:
Sediment particle size % weight
Sample depth (ft.):
>2.0mm :
1.0 - 2.0mm :
0.5 - 2.0mm :
0.25 - 0.5mm :
0.125 - 0.5mm :
0.125 - 0.25mm :
0.0625 - 0.125mm :
<0.0625mm :
Sediment organic :

COMMENTS: INCOMING TIDE

Approved By : LEE BANKS Date: 1990/12/04

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 900805 DATE: 1990/12/04
SAMPLE SOURCE: SCM GLIDCO EFFLUENT TIME: 1100
STATION NUMBER: SAMPLER: BULGRIN/HOLLINGSWORTH
STATION LOCATION: SCM GLIDCO EFFLUENT
Fixed monitoring: State: X Special Project: Dredge & Fill:
NPDES: Intensive Survey: Response Operation:
Domestic Waste: Other:
SAMPLE SUPPORTS Compliance: X Enforcement:
FIELD MEASURMENTS

Total depth:		Sample depth	:	Water temp. (oC):	30.4
pH	: 7.52	Conductivity	: 900	Dissolved Oxygen:	3.8
Secchi	:	Stream Velocity:		Salinity	:

WEATHER CONDITIONS : WINDY & COLD

LABORATORY MEASURMENTS

PARAMETER		PARAMETER	
Turbidity (NTU)	: 1.5	Color (PtCo)	: 10
Conductivity (uMHO)	: 600	pH (standard units)	: 8.01

The following values are in ppm.

COD	: 19	Oil & Grease	:
CBOD	:	NO2 as N	:
Total TKN	:	Total NO2+NO3 as N	:
Total NH3 as N	:	Total NO3 as N	:
Chloride	:	Ortho PO4 as P	:
Alkalinity	:	Total PO4 as P	:
Dissolved Oxygen	: 6.56	Sulfate	:
BOD	: 6	Fluoride	:
TOT SS	: 1	TOT TS	:
VOL SS	: 1	VOL TS	:
FIX SS	: <1	FIX TS	:
Chlorophyl a	:	Pheophytin	:

SEDIMENT VALUES ARE IN mg/Kg
ALL OTHER VALUES ARE IN ug/L

Aluminum	:	Arsenic	:	Barium	:
Cadmium	:	Calcium	:	Chromium	
Copper	:	Iron	:	Lead	:
Magnesium	:	Manganese	:	Mercury	:
Nickel	:	Potassium	:	Selenium	:
Silver	:	Sodium	:	Zinc	:

COMMENTS:

TIDE :
SAMPLE CUSTODY

Sample Released To: GRACIE KENNEDY Date: 1990/12/05 Time: 0730
Preservation: ICE

Reported By : BIPIN ADHYARU Date: 1990/12/17

DEPARTMENT OF ENVIRONMENT REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 91112 DATE: 1990/12/04
SAMPLE SOURCE: SCM GLIDCO EFFLUENT TIME: 1100
STATION NUMBER: SAMPLER: BULGRIN/HOLLINGSWORTH
STATION LOCATION: SCM GLIDCO, DUVAL CO.
Fixed monitoring: Special Project: Dredge & Fill:
Intensive Survey: Response Operation:
Other: POINT SOURCE COMPLIANCE
PARAMETERS PERFORMED
Natural Substrate: Qualitative: Sediment(grain size):
Bacteria: X Other:

FIELD MEASURMENTS
ph: Conductivity: Dissolved oxygen: Temperature(C):
Secchi: Total depth(ft.):

WEATHER CONDITIONS:

The following were analyzed by: Date out:
Sample depth (ft.) :
Species Diversity Index:
Quantitative # of taxa :
Density (#/m2) :
Qualitative # of taxa :
Florida Biotic Index :

The following were analyzed by: MIKE HOLLINGSWORTH Date out: 1990/12/06
All vaules reported in #/100mL

Total coliform (MF)	: 240T	Total coliform (MPN)	:
Fecal coliform (MF)	: 20Me	Fecal coliform (MPN)	:
Fecal strep (MF)	:	Fecal strep (MPN)	:
Heterotrophic Plate #/mL	:	Enterococci (MF)	:

MF : Membrane Filter
MPN: Most Probable Number (Tubes)
M : Moderate non-coliform growth
T: Too Numerous To Count n-c growth
C: Confluent (Heavy) n-c growth
e: Estimate count outside acpt. range

The following were analyzed by: Date out:
Sediment particle size % weight
Sample depth (ft.):
>2.0mm :
1.0 - 2.0mm :
0.5 - 2.0mm :
0.25 - 0.5mm :
0.125 - 0.5mm :
0.125 - 0.25mm :
0.0625 - 0.125mm :
<0.0625mm :
Sediment organic :

COMMENTS: OUTGOING TIDE

Approved By : LEE BANKS Date: 1990/12/18

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 900788 DATE: 1990/11/28
SAMPLE SOURCE: SCM GLIDCO ORGANICS TIME: 1200
STATION NUMBER: D002 SAMPLER: BULGRIN
STATION LOCATION: 24 Hrs COMPOSITE #1
Fixed monitoring: State: X Special Project: Dredge & Fill:
NPDES: Intensive Survey: Response Operation:
Domestic Waste: Other:
SAMPLE SUPPORTS Compliance: X Enforcement:
FIELD MEASURMENTS

Total depth:	Sample depth :	Water temp. (oC):
pH :	Conductivity :	Dissolved Oxygen:
Secchi :	Stream Velocity:	Salinity :

WEATHER CONDITIONS :

LABORATORY MEASURMENTS

PARAMETER		PARAMETER	
Turbidity (NTU)	:	Color (PtCo)	:
Conductivity (uMHO):		pH (standard units)	: 8.04

The following values are in ppm.

COD	: 14.8	Oil & Grease	: <1
CBOD	:	NO2 as N	:
Total TKN	:	Total NO2+NO3 as N	:
Total NH3 as N	:	Total NO3 as N	:
Chloride	:	Ortho PO4 as P	:
Alkalinity	:	Total PO4 as P	:
Dissolved Oxygen	:	Sulfate	:
BOD	:	Fluoride	:
TOT SS	:	TOT TS	:
VOL SS	:	VOL TS	:
FIX SS	:	FIX TS	:
Chlorophyl a	:	Pheophytin	:

SEDIMENT VALUES ARE IN mg/Kg
ALL OTHER VALUES ARE IN ug/L

Aluminum	:	Arsenic	:	Barium	:
Cadmium	:	Calcium	:	Chromium	:
Copper	:	Iron	:	Lead	:
Magnesium	:	Manganese	:	Mercury	:
Nickel	:	Potassium	:	Selenium	:
Silver	:	Sodium	:	Zinc	:

COMMENTS:

TIDE :
SAMPLE CUSTODY

Sample Released To: GRACIE KENNEDY Date: 1990/11/28 Time: 1350
Preservation: ICE

Reported By : BIPIN ADHYARU Date: 1990/12/19

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 900789 DATE: 1990/11/28
SAMPLE SOURCE: SCM GLIDCO ORGANICS TIME: 1200
STATION NUMBER: D002 SAMPLER: BULGRIN
STATION LOCATION: 24 Hrs COMPOSITE #2
Fixed monitoring: State: X Special Project: Dredge & Fill:
NPDES: Intensive Survey: Response Operation:
Domestic Waste: Other:
SAMPLE SUPPORTS Compliance: X Enforcement:
FIELD MEASURMENTS

Total depth:	Sample depth :	Water temp. (oC):
pH :	Conductivity :	Dissolved Oxygen:
Secchi :	Stream Velocity:	Salinity :

WEATHER CONDITIONS :

LABORATORY MEASURMENTS

PARAMETER		PARAMETER	
Turbidity (NTU)	:	Color (PtCo)	:
Conductivity (uMHO):		pH (standard units)	: 8.15

The following values are in ppm.

COD	: 17.7	Oil & Grease	: <1
CBOD	:	NO2 as N	:
Total TKN	:	Total NO2+NO3 as N	:
Total NH3 as N	:	Total NO3 as N	:
Chloride	:	Ortho PO4 as P	:
Alkalinity	:	Total PO4 as P	:
Dissolved Oxygen	:	Sulfate	:
BOD	:	Fluoride	:
TOT SS	:	TOT TS	:
VOL SS	:	VOL TS	:
FIX SS	:	FIX TS	:
Chlorophyl a	:	Pheophytin	:

SEDIMENT VALUES ARE IN mg/Kg
ALL OTHER VALUES ARE IN ug/L

Aluminum	:	Arsenic	:	Barium	:
Cadmium	:	Calcium	:	Chromium	:
Copper	:	Iron	:	Lead	:
Magnesium	:	Manganese	:	Mercury	:
Nickel	:	Potassium	:	Selenium	:
Silver	:	Sodium	:	Zinc	:

COMMENTS:

TIDE :
SAMPLE CUSTODY

Sample Released To: GRACIE KENNEDY Date: 1990/11/28 Time: 1350
Preservation: ICE

Reported By : BIPIN ADHYARU Date: 1990/12/19

SCM EFFLUENT

Sample Number: 90-NOV-29-04-03 Test status: Authorized by Tim Fitzpatrick
Analysis Id: SE-G-W Analysis Description: Selenium in water by furnace AA

Storet Number	Analyte	Result	Units
01147	Selenium	20 U	ug/L

Sample Number: 90-NOV-29-04-03 Test status: Authorized by Tim Fitzpatrick
Analysis Id: W-ICP-23 Analysis Description: ICP multielement analysis for water samples

Storet Number	Analyte	Result	Units
01106	Aluminum	NR	ug/L
01002	Arsenic	NR	ug/L
01097	Antimony	NR	ug/L
01007	Barium	15 A	ug/L
01012	Beryllium	NR	ug/L
01027	Cadmium	NR	ug/L
00916	Calcium	NR	mg/L
01034	Chromium	10 U	ug/L
01037	Cobalt	NR	ug/L
01042	Copper	24 A	ug/L
01045	Iron	577 A	ug/L
01051	Lead	164 A	ug/L
00927	Magnesium	NR	mg/L
01055	Manganese	NR	ug/L
01067	Nickel	10 T	ug/L
00937	Potassium	NR	mg/L
01147	Selenium	NR	ug/L
01077	Silver	NR	ug/L
00929	Sodium	NR	mg/L
01082	Strontium	NR	ug/L
01059	Thallium	NR	ug/L
01087	Vanadium	NR	ug/L
01092	Zinc	42 A	ug/L
	Comment	NONE	

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E - Scientific notation
J - Estimated value
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N - Not analyzed for this compound
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U - Material was analyzed for but not detected; The value reported is the mimimum detection limit
N/A - Not applicable NR - Not requested

Sample Number: 90-NOV-29-04-03
Sample Location: SCM Corp Effluent
Field ID:
Date/Time Collected: 27-NOV-1990 11:00:58.25
Comments:

Sample Status: Authorized by Tim Fitzpatrick
Matrix: Effluent
Storet Station Number:

Sample Number: 90-NOV-29-04-03
Analysis Id: AG-G-W

Test status: Authorized by Tim Fitzpatrick
Analysis Description: Silver in water by furnace AA

Storet Number	Analyte	Result	Units
01077	Silver	2 U	ug/L

Sample Number: 90-NOV-29-04-03
Analysis Id: AS-G-W

Test status: Authorized by Tim Fitzpatrick
Analysis Description: arsenic by graphite furnace for water samples

Storet Number	Analyte	Result	Units
01002	Arsenic	8 U	ug/L

Sample Number: 90-NOV-29-04-03
Analysis Id: CD-G-W

Test status: Authorized by Tim Fitzpatrick
Analysis Description: Cadmium by graphite furnace for water samples

Storet Number	Analyte	Result	Units
01027	Cadmium	2 U	ug/L

Sample Number: 90-NOV-29-04-03
Analysis Id: HG-H-W

Test status: Authorized by Tim Fitzpatrick
Analysis Description: Mercury by cold vapor using hydride sys.-water

Storet Number	Analyte	Result	Units
71900	Mercury	0.2 U	ug/L

Sample Number: 90-NOV-29-04-03
Analysis Id: PB-G-W

Test status: Authorized by Tim Fitzpatrick
Analysis Description: Lead by furnace AA in water

Storet Number	Analyte	Result	Units
01051	Lead	N - ICP RESULT REPORTED	ug/L

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N/A - Not applicable NR - Not requested

Sample Number: 90-DEC-06-18-04
Sample Location: SCM Glidco Effluent
Field ID:
Date/Time Collected: 4-DEC-1990 11:00:17.31
Comments:

Sample Status: Authorized by Yuh-Hsu Pan
Matrix: Effluent
Storet Station Number:

Sample Number: 90-DEC-06-18-04 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-CL Analysis Description: Analysis for chloride in water

Storet Number	Analyte	Result	Units
00940	Chloride	37 A	mg Cl/L

Sample Number: 90-DEC-06-18-04 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-F Analysis Description: Analysis for fluoride in water

Storet Number	Analyte	Result	Units
00951	Fluoride	0.93 A	mg F/L

Sample Number: 90-DEC-06-18-04 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-PO4 Analysis Description: Orthophosphate analysis for water samples

Storet Number	Analyte	Result	Units
70507	O-Phosphate-P	0.20 A	mg P/L

Sample Number: 90-DEC-06-18-04 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-SO4 Analysis Description: Analysis for sulfate in water

Storet Number	Analyte	Result	Units
00945	Sulfate	99 A	mg SO4/L

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N/A - Not applicable NR - Not requested

Sample Number: 90-NOV-29-05-01
Sample Location: SCM Corp Effluent
Field ID:
Date/Time Collected: 27-NOV-1990 11:00:27.78
Comments:

Sample Status: Authorized by MEI FANG
Matrix: Effluent
Storet Station Number:

Sample Number: 90-NOV-29-05-01
Analysis Id: W-BNA

Test status: Authorized by Laura Harrison
Analysis Description: base-neutral-acid water analysis

Storet Number	Analyte	Result	Units
34205	Acenaphthene	10 U	ug/L
34200	Acenaphthylene	10 U	ug/L
39330	Aldrin	10 U	ug/L
34220	Anthracene	10 U	ug/L
34526	Benzo(a)anthracene	10 U	ug/L
34230	Benzo(b)fluoranthene	10 U	ug/L
34242	Benzo(k)fluoranthene	10 U	ug/L
34247	Benzo(a)pyrene	10 U	ug/L
34521	Benzo(g,h,i)perylene	15 U	ug/L
34292	Benzyl butyl phthalate	10 U	ug/L
	a-BHC	10 U	ug/L
39337	b-BHC	10 U	ug/L
39340	d-BHC	10 U	ug/L
	g-BHC	10 U	ug/L
39120	Benzidine	10 U	ug/L
34273	Bis(2-chloroethyl)ether	10 U	ug/L
34278	Bis(2-chloroethoxy)methane	15 U	ug/L
34283	Bis(2-chloroisopropyl)ether	15 U	ug/L
39100	Bis(2-ethylhexyl)phthalate	10 U	ug/L
34636	4-Bromophenyl phenyl ether	10 U	ug/L
34581	2-Chloronaphthalene	10 U	ug/L
34641	4-Chlorophenyl phenyl ether	10 U	ug/L
34320	Chrysene	10 U	ug/L
39310	4,4'-DDD	10 U	ug/L
39320	4,4'-DDE	10 U	ug/L
39300	4,4'-DDT	10 U	ug/L
34556	Dibenzo(a,h)anthracene	15 U	ug/L
39110	Di-n-butyl phthalate	10 U	ug/L
34536	1,2-Dichlorobenzene	10 U	ug/L
34566	1,3-Dichlorobenzene	10 U	ug/L
34571	1,4-Dichlorobenzene	10 U	ug/L
34631	3,3'-Dichlorobenzidine	10 U	ug/L
39380	Dieldrin	10 U	ug/L
34336	Diethylphthalate	10 U	ug/L
34341	Dimethylphthalate	10 U	ug/L
34611	2,4-Dinitrotoluene	10 U	ug/L
34626	2,6-Dinitrotoluene	10 U	ug/L
34596	Di-n-octyl phthalate	10 U	ug/L
34361	Endosulfan-I	10 U	ug/L

Continued

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Cont. from previous page for Sample Number: 90-NOV-29-05-01 Analysis_id: W-ENA

34356	Endosulfan-II	10 U	ug/L
34351	Endosulfan-sulfate	10 U	ug/L
39390	Endrin	10 U	ug/L
34366	Endrin-aldehyde	10 U	ug/L
34376	Fluoranthene	10 U	ug/L
34381	Fluorene	10 U	ug/L
39410	Heptachlor	10 U	ug/L
39420	Heptachlor-epoxide	10 U	ug/L
39700	Hexachlorobenzene	15 U	ug/L
34391	Hexachlorobutadiene	10 U	ug/L
34396	Hexachloroethane	60 U	ug/L
34386	Hexachlorocyclypentadiene	10 U	ug/L
34403	Indeno(1,2,3-cd)pyrene	10 U	ug/L
34408	Isophorone	10 U	ug/L
34696	Naphthalene	10 U	ug/L
34447	Nitrobenzene	10 U	ug/L
34438	N-Nitrosodimethylamine	50 U	ug/L
34428	N-Nitrosodi-n-propylamine	10 U	ug/L
34433	N-Nitrosodiphenylamine	15 U	ug/L
34671	PCB-1016	10 U	ug/L
39488	PCB-1221	10 U	ug/L
39492	PCB-1232	10 U	ug/L
39496	PCB-1242	10 U	ug/L
39500	PCB-1248	10 U	ug/L
39504	PCB-1254	10 U	ug/L
39508	PCB-1260	10 U	ug/L
	PCB-1262	10 U	ug/L
34461	Phenanthrene	10 U	ug/L
34469	Pyrene	10 U	ug/L
39400	Toxaphene	10 U	ug/L
34551	1,2,4-Trichlorobenzene	10 U	ug/L
34462	4-Chloro-3-methyl phenol	15 U	ug/L
34586	2-Chlorophenol	15 U	ug/L
34601	2,4-Dichlorophenol	15 U	ug/L
34606	2,4-Dimethylphenol	15 U	ug/L
34616	2,4-Dinitrophenol	30 U	ug/L
34657	2-Methyl-4,6-dinitrophenol	30 U	ug/L
34591	2-Nitrophenol	15 U	ug/L
34646	4-Nitrophenol	50 U	ug/L
39032	Pentachlorophenol	15 U	ug/L
34694	Phenol	15 U	ug/L
34621	2,4,6-Trichlorophenol	15 U	ug/L

Comments (1): Tentative identificatio of C10-11 aliphatic <10 ug/L.
(2):
(3):
(4):
(5):
(6):

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N/A - Not applicable NR - Not requested

Sample Number: 90-NOV-29-02-05 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: SCM Corp Effluent Matrix: Effluent
Field ID: Storet Station Number:
Date/Time Collected: 27-NOV-1990 11:00:01.97
Comments:

Sample Number: 90-NOV-29-02-05 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.12 A	mg N/L

Sample Number: 90-NOV-29-02-05 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.035 T	mg N/L

Sample Number: 90-NOV-29-02-06 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: SCM Corp Trip Blank Matrix: Trip Blank
Field ID: Storet Station Number:
Date/Time Collected: 27-NOV-1990 07:00:01.97
Comments:

Sample Number: 90-NOV-29-02-06 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.010 U	mg N/L

Sample Number: 90-NOV-29-02-06 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.020 U	mg N/L

End of Report

A - Value reported is the mean of two or more determinations
E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practical quantitation limit
U - Material was analyzed for but not detected; The value reported is the minimum detection limit
N/A - Not applicable NR - Not requested

SCM
DOWN

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 900785 DATE: 1990/11/27
SAMPLE SOURCE: SCM GLIDCO TIME: 1420
STATION NUMBER: SAMPLER: BULGRIN/SIEBOLD/WRIGHT
STATION LOCATION: MONCRIEF AT FORK Downstream
Fixed monitoring: State: X Special Project: Dredge & Fill:
NPDES: Intensive Survey: Response Operation:
Domestic Waste: Other:
SAMPLE SUPPORTS Compliance: X Enforcement:
FIELD MEASURMENTS

Total depth	3.0	Sample depth	1.5	Water temp. (oC)	21.9
pH	8.22	Conductivity	21000	Dissolved Oxygen	11.8
Secchi	0.8	Stream Velocity	0.25 IN	Salinity	12

WEATHER CONDITIONS :

LABORATORY MEASURMENTS

PARAMETER		PARAMETER	
Turbidity (NTU)	4.9	Color (PtCo)	50
Conductivity (uMHO)	21100	pH (standard units)	8.29

The following values are in ppm.

COD	102	Oil & Grease	
CBOD		NO2 as N	
Total TKN		Total NO2+NO3 as N	
Total NH3 as N		Total NO3 as N	
Chloride		Ortho PO4 as P	
Alkalinity		Total PO4 as P	
Dissolved Oxygen	11.25	Sulfate	
BOD	8.7	Fluoride	
TOT SS	20	TOT TS	
VOL SS	11	VOL TS	
FIX SS	9	FIX TS	
Chlorophyl a		Pheophytin	

SEDIMENT VALUES ARE IN mg/Kg
ALL OTHER VALUES ARE IN ug/L

Aluminum	Arsenic	Barium
Cadmium	Calcium	Chromium
Copper	Iron	Lead
Magnesium	Manganese	Mercury
Nickel	Potassium	Selenium
Silver	Sodium	Zinc

COMMENTS:

TIDE :
SAMPLE CUSTODY

Sample Released To: GRACIE C.KENNEDY Date: 1990/11/28 Time: 0730
Preservation: ICE

Reported By : BIPIN ADHYARU Date: 1990/12/17

DEPARTMENT OF ENVIRONMENT REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 91106 DATE: 1990/11/27
SAMPLE SOURCE: MONCRIEF CREEK TIME: 1420
STATION NUMBER: SAMPLER: BULGRIN/SIEBOLD
STATION LOCATION: AT FORK DOWNSTREAM OF SCM CORP.
Fixed monitoring: Special Project: Dredge & Fill:
Intensive Survey: Response Operation:
Other: PSC
PARAMETERS PERFORMED
Natural Substrate: Qualitative: Sediment(grain size):
Bacteria: X Other:

FIELD MEASURMENTS
ph: 8.22 Conductivity: 21,000 Dissolved oxygen: 11.8 Temperature(C): 21.9
Secchi: 0.8 Total depth(ft.): 3.0

WEATHER CONDITIONS:

The following were analyzed by: Date out:
Sample depth (ft.) :
Species Diversity Index:
Quantitative # of taxa :
Density (#/m2) :
Qualitative # of taxa :
Florida Biotic Index :

The following were analyzed by: MIKE HOLLINGSWORTH Date out: 1990/11/29
All vaules reported in #/100mL

Total coliform (MF)	: 220M	Total coliform (MPN):	
Fecal coliform (MF)	: 170e	Fecal coliform (MPN):	
Fecal strep (MF)	:	Fecal strep (MPN):	
Heterotrophic Plate #/mL	:	Enterococci (MF) :	

MF : Membrane Filter
MPN: Most Probable Number (Tubes)
M : Moderate non-coliform growth
T: Too Numerous To Count n-c growth
C: Confluent (Heavy) n-c growth
e: Estimate count outside acpt. range

The following were analyzed by: Date out:
Sediment particle size % weight
Sample depth (ft.):
>2.0mm :
1.0 - 2.0mm :
0.5 - 2.0mm :
0.25 - 0.5mm :
0.125 - 0.5mm :
0.125 - 0.25mm :
0.0625 - 0.125mm :
<0.0625mm :
Sediment organic :

COMMENTS: INCOMING TIDE

Approved By : LEE BANKS Date: 1990/12/04

SCM
DOWN

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 900806 DATE: 1990/12/04
SAMPLE SOURCE: SCM GLIDCO TIME: 1150
STATION NUMBER: SAMPLER: BULGRIN/HOLLINGSWORTH
STATION LOCATION: MONCRIEF CR. @ FORK DOWNSTREAM OF SCM
Fixed monitoring: State: X Special Project: Dredge & Fill:
NPDES: Intensive Survey: Response Operation:
Domestic Waste: Other:
SAMPLE SUPPORTS Compliance: X Enforcement:
FIELD MEASURMENTS

Total depth	4.0	Sample depth	2.0	Water temp. (oC)	19.6
pH	7.70	Conductivity	25300	Dissolved Oxygen	7.10
Secchi	1.1	Stream Velocity	<0.25	Salinity	17

WEATHER CONDITIONS : WINDY & COLD

LABORATORY MEASURMENTS

PARAMETER		PARAMETER	
Turbidity (NTU)	3.5	Color (PtCo)	40
Conductivity (uMHO)	26100	pH (standard units)	7.70

The following values are in ppm.

COD	99	Oil & Grease	
CBOD		NO2 as N	
Total TKN		Total NO2+NO3 as N	
Total NH3 as N		Total NO3 as N	
Chloride		Ortho PO4 as P	
Alkalinity		Total PO4 as P	
Dissolved Oxygen	7.0	Sulfate	
BOD	2.65	Fluoride	
TOT SS	12	TOT TS	
VOL SS	6	VOL TS	
FIX SS	6	FIX TS	
Chlorophyl a		Pheophytin	

SEDIMENT VALUES ARE IN mg/Kg
ALL OTHER VALUES ARE IN ug/L

Aluminum		Arsenic		Barium	
Cadmium		Calcium		Chromium	
Copper		Iron		Lead	
Magnesium		Manganese		Mercury	
Nickel		Potassium		Selenium	
Silver		Sodium		Zinc	

COMMENTS:

TIDE :
SAMPLE CUSTODY

Sample Released To: GRACIE KENNEDY Date: 1990/12/05 Time: 0730
Preservation: ICE

Reported By : BIPIN ADHYARU Date: 1990/12/17

DEPARTMENT OF ENVIRONMENT REGULATION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY SUITE 200B
JACKSONVILLE, FL 32256-7577

SAMPLE ID NO.: 91113 DATE: 1990/12/04
SAMPLE SOURCE: MONCRIEF CREEK TIME: 1150
STATION NUMBER: SAMPLER: BULGRIN/HOLLINGSWORTH
STATION LOCATION: MONCRIEF CREEK FORK DOWNSTREAM SCM GLIDCO
Fixed monitoring: Special Project: Dredge & Fill:
Intensive Survey: Response Operation:
Other: POINT SOURCE COMPLIANCE
PARAMETERS PERFORMED
Natural Substrate: Qualitative: Sediment(grain size):
Bacteria: X Other:

FIELD MEASURMENTS
ph: Conductivity: Dissolved oxygen: Temperature(C):
Secchi: Total depth(ft.):

WEATHER CONDITIONS:

The following were analyzed by: Date out:
Sample depth (ft.) :
Species Diversity Index:
Quantitative # of taxa :
Density (#/m2) :
Qualitative # of taxa :
Florida Biotic Index :

The following were analyzed by: MIKE HOLLINGSWORTH Date out: 1990/12/06
All vaules reported in #/100mL

Total coliform (MF)	: 360M	Total coliform (MPN):	
Fecal coliform (MF)	: 190e	Fecal coliform (MPN):	
Fecal strep (MF)	:	Fecal strep (MPN):	
Heterotrophic Plate #/mL	:	Enterococci (MF) :	

MF : Membrane Filter
MPN: Most Probable Number (Tubes)
M : Moderate non-coliform growth
T: Too Numerous To Count n-c growth
C: Confluent (Heavy) n-c growth
e: Estimate count outside acpt. range

The following were analyzed by: Date out:
Sediment particle size % weight
Sample depth (ft.):
>2.0mm :
1.0 - 2.0mm :
0.5 - 2.0mm :
0.25 - 0.5mm :
0.125 - 0.5mm :
0.125 - 0.25mm :
0.0625 - 0.125mm :
<0.0625mm :
Sediment organic :

COMMENTS: OUTGOING TIDE

Approved By : LEE BANKS Date: 1990/12/18

Sample Number: 90-NOV-29-02-01 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Moncrief Creek at mouth of Trout River Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 27-NOV-1990 14:45:01.97
Comments:

Sample Number: 90-NOV-29-02-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.015 T	mg N/L

Sample Number: 90-NOV-29-02-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.20 A	mg N/L

Sample Number: 90-NOV-29-02-02 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Moncrief Creek ~1/4 mile upstream of SCM Glidco Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 28-NOV-1990 10:40:01.97
Comments:

Sample Number: 90-NOV-29-02-02 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.094 A	mg N/L

Sample Number: 90-NOV-29-02-02 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.10 A	mg N/L

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N/A - Not applicable NR - Not requested

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive • Tallahassee, FL 32301 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T0-14367

Received: 14 DEC 90

Dr. Yuh-Hsu Pan
DER-Chemistry Section
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Project: T129/District Samples

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
14367-27	8674	Client
14367-28	8675	
14367-29	8676	
14367-30	8677	

SCM DOWN — SCM EFFLUENT

PARAMETER	14367-27	14367-28	14367-29	14367-30
Total Kjeldahl Nitrogen-N, mg/l	1.2	0.36	<0.10	<0.10
Total Phosphorus, mg/l	0.17	0.14	<0.10	<0.10

Sample Number: 90-NOV-01-18-01 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Duval Co. Matrix: Salt Surf Water
Field ID: Montcrief Creek at Fork Storet Station Number:
Date/Time Collected: 30-OCT-1990 10:45:19.52
Comments:

SCM DOWN

Sample Number: 90-NOV-01-18-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.010 U	mg N/L

Sample Number: 90-NOV-01-18-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.31 A	mg N/L

Sample Number: 90-NOV-01-18-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-TKN Analysis Description: TKN for water sample

Storet Number	Analyte	Result	Units
00625	N_KJEL_TOT	0.67 A	mg N/L

Sample Number: 90-NOV-01-18-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-TP Analysis Description: Analysis for total phosphorus in water

Storet Number	Analyte	Result	Units
00665	Total-P	0.28 A	mg P/L

A - Value reported is the mean of two or more determinations
E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practice quantiation limit
U - Material was analyzed for but not detected; The value reported is the mimimum detection limit
N/A - Not applicable NR - Not requested

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FL 32207

SAMPLE ID NO.: 900711 DATE: 1990/10/30
SAMPLE SOURCE: SCM-GLIDCO/RECON TIME: 1045
STATION NUMBER: SCM DOWN SAMPLER: BULGRIN
STATION LOCATION: MONCRIF CREEK @FORK
Fixed monitoring: State: Special Project: Dredge & Fill:
NPDES: Intensive Survey: Response Operation:
Domestic Waste: Other: X
SAMPLE SUPPORTS Compliance: X Enforcement:
FIELD MEASURMENTS

Total depth	2	Sample depth	1	Water temp. (oC)	20.7
pH	7.66	Conductivity	22100	Dissolved Oxygen	7.5
Secchi	0.6L	Stream Velocity	0.5	Salinity	

WEATHER CONDITIONS : SUNNY OUTGOING TIDE NORTH WIND

LABORATORY MEASURMENTS

PARAMETER		PARAMETER	
Turbidity (NTU)	5.5	Color (PtCo)	50
Conductivity (uMHO)	23000	pH (standard units)	7.75

The following values are in ppm.

COD		Oil & Grease	
CBOD		NO2 as N	
Total TKN		Total NO2+NO3 as N	
Total NH3 as N		Total NO3 as N	
Chloride		Ortho PO4 as P	
Alkalinity		Total PO4 as P	
Dissolved Oxygen	7.35	Sulfate	
BOD	3.1	Fluoride	
TOT SS	17	TOT TS	
VOL SS	6	VOL TS	
FIX SS	11	FIX TS	
Chlorophyl a		Pheophytin	

SEDIMENT VALUES ARE IN mg/Kg
ALL OTHER VALUES ARE IN ug/L

Aluminum	Arsenic	Barium
Cadmium	Calcium	Chromium
Copper	Iron	Lead
Magnesium	Manganese	Mercury
Nickel	Potassium	Selenium
Silver	Sodium	Zinc

COMMENTS:

TIDE :
SAMPLE CUSTODY

Sample Released To: BIPIN ADHYARU Date: 1990/10/30 Time: 1545
Preservation: ICE

Reported By : BIPIN ADHYARU Date: 1990/11/05

Sample Number: 90-NOV-01-17-01 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Duval Co. Matrix: Salt Surf Water
Field ID: Montcrief Creek at Fork Storet Station Number:
Date/Time Collected: 30-OCT-1990 10:45:36.43
Comments: SCM DOWN

Sample Number: 90-NOV-01-17-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-CL Analysis Description: Analysis for chloride in water

Storet Number	Analyte	Result	Units
00940	Chloride	1200 A	mg Cl/L

Sample Number: 90-NOV-01-17-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-F Analysis Description: Analysis for fluoride in water

Storet Number	Analyte	Result	Units
00951	Fluoride	0.52 A	mg F/L

Sample Number: 90-NOV-01-17-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-PO4 Analysis Description: Orthophosphate analysis for water samples

Storet Number	Analyte	Result	Units
70507	O-Phosphate-P	0.13 A	mg P/L

Sample Number: 90-NOV-01-17-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-SO4 Analysis Description: Analysis for sulfate in water

Storet Number	Analyte	Result	Units
00945	Sulfate	2.0 U	mg SO4/L

End of Report

A - Value reported is the mean of two or more determinations
E - Scientific notation
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L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practice quantiation limit
U - Material was analyzed for but not detected; The value reported is the minimum detection limit
N/A - Not applicable NR - Not requested

STATE OF FLORIDA
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

...LABORATORY SERVICES
...210
JACKSONVILLE, FL 32231

Bacteriological Analysis of Environmental Waters*

County Duval Address D.E.R. 7825 Baymeadows Way Suite 200B Jax 32256-757

Collector Bulgrin/Wright Location Trout River/Moncrief Cr.

Date Collected 10/30/90 Date Rec'd 10/30/90 Date Reported 11/5/90

Lab. No.	Station No.	Total Coliform MPN/MF**	Fecal Coliform MPN/MF**	Fecal Strep. MPN/MF**	Entero-cocci MF	E. Coli MF
3640	1045 Montcrief Cr. at fork	1300	500			

Sample Number: 90-DEC-06-20-01 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Moncrief Creek at fork downstream of SCM Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 4-DEC-1990 11:50:28.77
Comments:

Sample Number: 90-DEC-06-20-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.19 A	mg N/L

Sample Number: 90-DEC-06-20-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.020 U	mg N/L

Sample Number: 90-DEC-06-20-02 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Mouth of Moncrief Creek at confluence with Trout Rive Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 4-DEC-1990 13:00:28.77
Comments:

Sample Number: 90-DEC-06-20-02 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.039 A	mg N/L

Sample Number: 90-DEC-06-20-02 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.021 T	mg N/L

A - Value reported is the mean of two or more determinations
E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practical quantitation limit
U - Material was analyzed for but not detected; The value reported is the minimum detection limit
N/A - Not applicable NR - Not requested

Sample Number: 90-NOV-29-02-03 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Moncrief Creek at fork downstream of SCM Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 27-NOV-1990 14:20:01.97
Comments:

Sample Number: 90-NOV-29-02-03 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.010 T	mg N/L

Sample Number: 90-NOV-29-02-03 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.020 U	mg N/L

Sample Number: 90-NOV-29-02-04 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Trout River Cove Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 27-NOV-1990 15:45:01.97
Comments:

Sample Number: 90-NOV-29-02-04 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NH3 Analysis Description: Analysis for ammonia in water

Storet Number	Analyte	Result	Units
00610	Ammonia-N	0.010 U	mg N/L

Sample Number: 90-NOV-29-02-04 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-NO2NO3 Analysis Description: Analysis for nitrite+nitrate in water

Storet Number	Analyte	Result	Units
00630	NO2NO3-N	0.020 U	mg N/L

A - Value reported is the mean of two or more determinations
E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practical quantitation limit
U - Material was analyzed for but not detected; The value reported is the minimum detection limit
N/A - Not applicable NR - Not requested

Sample Number: 90-DEC-06-18-01 Sample Status: Authorized by Yuh-Hsu Pan
Sample Location: Moncrief Creek at fork downstream of SCM Matrix: Salt Surf Water
Field ID: Storet Station Number:
Date/Time Collected: 4-DEC-1990 11:50:17.31
Comments:

Sample Number: 90-DEC-06-18-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-CL Analysis Description: Analysis for chloride in water

Storet Number	Analyte	Result	Units
00940	Chloride	810 A	mg Cl/L

Sample Number: 90-DEC-06-18-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-F Analysis Description: Analysis for fluoride in water

Storet Number	Analyte	Result	Units
00951	Fluoride	1.2 A	mg F/L

Sample Number: 90-DEC-06-18-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-PO4 Analysis Description: Orthophosphate analysis for water samples

Storet Number	Analyte	Result	Units
70507	O-Phosphate-P	0.20 A	mg P/L

Sample Number: 90-DEC-06-18-01 Test status: Authorized by Yuh-Hsu Pan
Analysis Id: W-SO4 Analysis Description: Analysis for sulfate in water

Storet Number	Analyte	Result	Units
00945	Sulfate	1800 A	mg SO4/L

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E - Scientific notation
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L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practice quantiation limit
U - Material was analyzed for but not detected; The value reported is the mimimum detection limit
N/A - Not applicable NR - Not requested

Sample Number: 90-NOV-01-19-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: SE-G-W Analysis Description: Selenium in water by furnace AA

Storet Number	Analyte	Result	Units
01147	Selenium	15 U	ug/L

Sample Number: 90-NOV-01-19-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: W-ICP-23 Analysis Description: ICP multielement analysis for water samples

Storet Number	Analyte	Result	Units
01106	Aluminum	NR	ug/L
01002	Arsenic	NR	ug/L
01097	Antimony	NR	ug/L
01007	Barium	31	ug/L
01012	Beryllium	NR	ug/L
01027	Cadmium	NR	ug/L
00916	Calcium	NR	mg/L
01034	Chromium	50 U	ug/L
01037	Cobalt	NR	ug/L
01042	Copper	57 T	ug/L
01045	Iron	208	ug/L
01051	Lead	NR	ug/L
00927	Magnesium	NR	mg/L
01055	Manganese	NR	ug/L
01067	Nickel	25 U	ug/L
00937	Potassium	NR	mg/L
01147	Selenium	NR	ug/L
01077	Silver	NR	ug/L
00929	Sodium	NR	mg/L
01082	Strontium	NR	ug/L
01059	Thallium	NR	ug/L
01087	Vanadium	NR	ug/L
01092	Zinc	25 U	ug/L
	Comment	NONE	

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E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practice quantiation limit
U - Material was analyzed for but not detected; The value reported is the minimum detection limit
N/A - Not applicable NR - Not requested

Sample Number: 90-NOV-01-19-01 Sample Status: Authorized by Tim Fitzpatrick
Sample Location: Duval Co. Matrix: Salt Surf Water
Field ID: Montcrief Creek at Fork Storet Station Number:
Date/Time Collected: 30-OCT-1990 10:45:46.89
Comments: DOWN-STREAM

Sample Number: 90-NOV-01-19-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: AG-G-W Analysis Description: Silver in water by furnace AA

Storet Number	Analyte	Result	Units
01077	Silver	1 K	ug/L

Sample Number: 90-NOV-01-19-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: AS-G-W Analysis Description: arsenic by graphite furnace for water samples

Storet Number	Analyte	Result	Units
01002	Arsenic	20 U	ug/L

Sample Number: 90-NOV-01-19-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: CD-G-W Analysis Description: Cadmium by graphite furnace for water samples

Storet Number	Analyte	Result	Units
01027	Cadmium	1 K	ug/L

Sample Number: 90-NOV-01-19-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: HG-H-W Analysis Description: Mercury by cold vapor using hydride sys.-water

Storet Number	Analyte	Result	Units
71900	Mercury	0.1 K	ug/L

Sample Number: 90-NOV-01-19-01 Test status: Authorized by Tim Fitzpatrick
Analysis Id: PB-G-W Analysis Description: Lead by furnace AA in water

Storet Number	Analyte	Result	Units
01051	Lead	10 U	ug/L

A - Value reported is the mean of two or more determinations
E - Scientific notation
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Not analyzed for this compound
T - Value reported is less than the practice quantiation limit
U - Material was analyzed for but not detected; The value reported is the mimimum detection limit
N/A - Not applicable NR - Not requested

DER Biology Section — Acute Bioassay Bench Sheet

Sample Source: SCM CORP.
Address/City: JAX
County: DUVAL
Contact/District: SCOTT BULGRIN
NPDES Permit #: FL0000384 **Outfall #:**

Sample Collection: Date 11-27-90 Time 1100
Test Beginning: Date 11-29-90 Time 1100
Test Ending: Date 12-1-90 Time 1100
Test Organism: N. LEEDSI
Life Stage/Age: 13 DAYS

Test Number: 1 of 2 **Test Type:** Screening | Definitive | (Static) | Static Renewal | Flow-through

Remarks:

Instrument Calibrations:

	pH	DO	Cond	Temp
0 hr	7@7,9@9	9.0@21.2°C	1373@24.1°C	21.4@23.6
24 hr	7@7,9@9	9.1@20.5°	1343@23.2°	19.0@20.7
48 hr	7@7,9@9	8.4@22.0	1345@23.7	21.5@23.5

		Number Live			DO (mg/l)			pH			Temp. (°C)			Cond. (µmhos/cm)		
Conc.	Chamber #	0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
CONT	15	5	5	5	7.7	7.5	9.2	7.59	7.7	8.3	20.0	21.8	21.0	231	224	236
"	57	5	5	5	8.1	7.5	9.2	7.66	7.8	8.4	20.0			232	231	240
100%	41	5	1	Ø	9.2	5.8	7.2	7.12	7.4	7.9	18.5	21.0	21.5	520	532	559
"	19	5	1	Ø	9.4	5.5	7.4	7.14	7.3	8.0	18.5			525	545	561
Measured/Loaded by:		RBF	AJ	SMC	RBF	AT		RBF	AT	SMC	RBF	AT	SMC	RBF	AT	SMC
Recorded by:		RBF	LB	SMC	AT	LB		AT	LB	SMC	AT	LB	SMC	AT	LB	SMC

Investigators' Signatures

Reviewer

Water-quality Parameters

	Well Water	Cond. Water	Sample	Method	Measured by
Field Tot. Resid. Cl2:					
Lab Tot. Resid. Cl2:			0.0	H4EH	RBF
Alkalinity:					
Hardness:					
Total Ammonia:					

Ammonia meter slope:

DER Biology Section — Acute Bioassay Bench Sheet

Sample Source: SCM CORP
Address/City: TAX
County: DUVAL
Contact/District: SCOT BULGRIN
NPDES Permit #: FL0000884 **Outfall #:** 001

Sample Collection: Date 11-27-90 Time 1100
Test Beginning: Date 11-29-90 Time 1100
Test Ending: Date 12-1-90 Time 1100
Test Organism: C. DUBIA
Life Stage/Age: < 24 HOURS

Test Number: 2 of 2 **Test Type:** Screening | Definitive
Static | Static Renewal | Flow-through

Remarks: separate ~~vials~~ used for parameter checks

Instrument Calibrations:

	pH	DO	Cond	Temp
0 hr				
24 hr				
48 hr				

Conc.	Chamber #	Number Live 0	24	48	DO (mg/l) 0	24	48	pH 0	24	48	Temp. (°C) 0	24	48	Cond. (µmhos/cm) 0	24	48
CONT	1	5	5	5	7.9	7.2	8.7	8.0	7.9	8.4	21.2	20.8	21.5	323	323	326
"	2	5	5	5	7.9	"	"	8.0	"	"	21.2	"	"	323	"	"
"	3	5	4	4	7.9	"	"	8.0	"	"	21.2	"	"	323	"	"
"	4	5	5	5	7.9	"	"	8.0	"	"	21.2	"	"	323	"	"
								~~7.3~~								
100%	5	5	5	5	8.8	7.6	8.8	7.3	8.0	8.5	19.8	21.0	21.5	493	523	543
"	6	5	5	5	8.8	"	"	7.3	"	"	19.8	"	"	493	"	~~543~~ SME
"	7	5	5	5	8.8	"	"	7.3	"	"	19.8	"	"	493	"	"
"	8	5	5	5	8.8	"	"	7.3	"	"	19.8	"	"	493	"	"
Measured/Loaded by:		AJ	AJ	SMC	RBF	AJ	SMC	RBF	AJ		RBF	AJ	SMC	RBF	AJ	SME
Recorded by:		RBF	AJ	SMC	AJ	LB	SMC	AJ	LB		AJ	LB	SMC	AJ	LB	SMC

Investigators' Signatures

Russell Frydenborg
Alison M. Jordan
Lyn Burton
Sandy McClure

Reviewer

Water-quality Parameters

	Well Water	Cond. Water	Sample	Method	Measured by
Field Tot. Resid. Cl2:					
Lab Tot. Resid. Cl2:					
Alkalinity:					
Hardness:					
Total Ammonia:					

Ammonia meter slope: _____

LAB ID: 10C

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
BIOLOGY LABORATORY SEDIMENT BENCH SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME: DER NE	STORET STATION NUMBER:	DATE (M/D/Y): 11/27/90	RECEIVING BODY OF WATER:	DEPTH, FEET: 3.0

REMARKS:	LOCATION: Moncrief Creek at Fork Downstream of SCM	FIELD ID/NAME:

Aliquot #1

Sediment Wet Weight: (for 2 aliquot method of wet sieving) (a) _____

Sediment Dry Weight (105°C): (for 1 aliquot method of wet or dry sieving, or for calculating dry wt. of aliquot #2) (b) 25.41

Aliquot #2

Sediment Wet Weight: (for 2 aliquot method of wet sieving) (c) _____

Aliquot #3 (for % organics)

Crucible Weight: (d) 51.80

Crucible + Dry Sediment (105°C) Wt.: (e) 76.83

Crucible + Ashed Sediment (550°C) Wt.: (f) 72.07

Percent Organics Calculation:

Sediment Dry (105°C) Weight: (e) - (d) = 76.83 − 51.80 = (g) 25.03

Sediment Ash (550°C) Weight: (f) - (d) = 72.01 − 51.80 = (h) 20.27

Percent Organics $\frac{((g) - (h)) \times 100}{(g)} = \frac{(25.03 - 20.27) \times 100}{25.03} =$ 19.02

Size Fraction Determination:

Dry Weight Calculation:
(for 2 aliquot method of wet sieving)

$\frac{(b)}{(a)} \times (c) = \frac{\quad}{\quad} \times \quad =$ (i) _____

weight (gms.) of material retained by:

% composition
(divide 1st column by (n) [dry sieve] or by (b) [wet sieve; 1 aliquot] or by (i) [wet sieve; 2 aliquot], and multiply by 100)

#10 sieve	(>2.0 mm)	(j)	1.38	5.43
#35 sieve	(0.5-2.0 mm)	(k)	1.54	6.06
#60 sieve	(0.25-0.5 mm)	(l)	0.90	3.54
#120 sieve	(0.125-0.25 mm)	(m)	9.42	37.01
#230 sieve	(0.063-0.125 mm)	(n)	6.47	25.46
[illegible]	[illegible]	(o)		
Total (dry sieve) (j) + (k) ... + (o)		(p)		
Total Retained (wet sieve) (j) + (k) ... + (n))		(q)	11.11	
Wet sieve fines ((b) - (q)) [1 aliquot method], or ((i) - (q)) [2 aliquots]	(<0.063 mm)		5.16	22.73
Wet sieve coarse fraction (after fines removal)	(>0.063 mm)		20.25	

ANALYSIS DATE:	ANALYST:	SIGNATURE:

LAB ID: 9C

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
BIOLOGY LABORATORY SEDIMENT BENCH SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME: DER NE	STORET STATION NUMBER:	DATE (MO/DY): 11/28/90	RECEIVING BODY OF WATER:	DEPTH, FEET: 3.0

REMARKS:	LOCATION: Moncrief Creek ~ 1/4 mile upstream of SCM	FIELD ID/NAME:

Aliquot #1
Sediment Wet Weight: (for 2 aliquot method of wet sieving) (a) _____
Sediment Dry Weight (105°C): (for 1 aliquot method of wet or dry sieving, or for calculating dry wt. of aliquot #2) (b) 32.26

Aliquot #2
Sediment Wet Weight: (for 2 aliquot method of wet sieving) (c) _____

Aliquot #3 (for % organics)
Crucible Weight: (d) 51.29
Crucible + Dry Sediment (105°C) Wt.: (e) 76.81
Crucible + Ashed Sediment (550°C) Wt.: (f) 75.81

Percent Organics Calculation:

Sediment Dry (105°C) Weight: (e) - (d) = 76.51 − 51.29 = (g) 25.52
Sediment Ash (550°C) Weight: (f) - (d) = 75.51 − 51.29 = (h) 24.52

Percent Organics: $\frac{((g) - (h)) \times 100}{(g)} = \frac{(25.52 - 24.52) \times 100}{25.52} =$ **3.92**

Size Fraction Determination:

Dry Weight Calculation:
(for 2 aliquot method of wet sieving)

$\frac{(b)}{(a)} \times (c) = \frac{\quad}{\quad} \times \quad =$ (i) _____

weight (gms.) of material retained by:

% composition
(divide 1st column by (n) [dry sieve] or by (b) [wet sieve; 1 aliquot] or by (l) [wet sieve; 2 aliquot], and multiply by 100)

#10 sieve	(>2.0 mm)	(j) 0.05	0.20
#35 sieve	(0.5-2.0 mm)	(k) 0.39	1.54
#60 sieve	(0.25-0.5 mm)	(l) 0.56	2.22
#120 sieve	(0.125-0.25 mm)	(m) 15.46	61.20
#230 sieve	(0.063-0.125 mm)	(n) 5.58	22.09
Pan (dry sieve only)	(<0.063 mm)	(o) _____	
Total (dry sieve) ((j) + (k)...+ (o))		(p) _____	
Total Retained (wet sieve) ((j) + (k)...+ (n))		(q) 32.64	
Wet sieve fines ((b) - (q)) [1 aliquot method], or ((i) - (q)) [2 aliquots]	(<0.063 mm)	[illegible]	12.75
Wet sieve coarse fraction (after fines removal)	(>0.063 mm)	32.57	

ANALYSIS DATE:	ANALYST:	SIGNATURE:
		[illegible]

Taxa List For SCM Glidco Corp., collected via ponar dredge on 3 December, 1990, in Moncrief Creek.

	Abundance (#/m^2)	
	Control Site	**Test Site**
Decapoda		
Callinectes sapidus	12	0
Chironomidae		
Chironomus decorus grp.	0	12
Malacostraca		
Munna reynoldsi	12	0
Oligochaeta		
Undetermined tubificid w/o capilliform setae	50	12
Polychaeta		
Capitella capitata	62	112
Laeonereis culveri	12	200
Neanthes succinea	37	0
Polydora ligni	75	12
Streblospio benedicti	0	50

Department of Environmental Regulation

Results of Fifth Year Inspections

Discharger: **SCM Glidco Organics Corp.**
County: **Duval**
NPDES Number: **FL0000884**
State Permit Expiration Date:

Toxics Sampling Inspection (XSI)

Date Sampled: 27 November 1990

Results: The discharge was in excess of ambient numeric criteria for copper, lead, and iron. Water from the downstream site was in violation of ambient criteria for copper, while copper and iron were above allowed levels at the control site. Aliphatic compounds (C_{10-11}) were detected in the discharge at levels less than 10 µg/l.

Compliance Biomonitoring Inspection (CBI)

Date Sampled: 27 November 1990

Results: The SCM Glidco effluent was acutely toxic to the fish, *Notropis leedsi* (i.e., a toxicity violation).

Impact Bioassessment Inspection (IBI)

Date Sampled: 27 November 1990

Results: Macroinvertebrate communities were degraded at both the control and test sites, owing to the toxic effluent and to the tidal nature of the creek (which allowed effluent to flow both ways). Non-point sources in the area may also affect the receiving waters. Due to the complications arising from multiple potential sources and the apparent widespread community stress in the area, further basin-wide assessments appear justified.

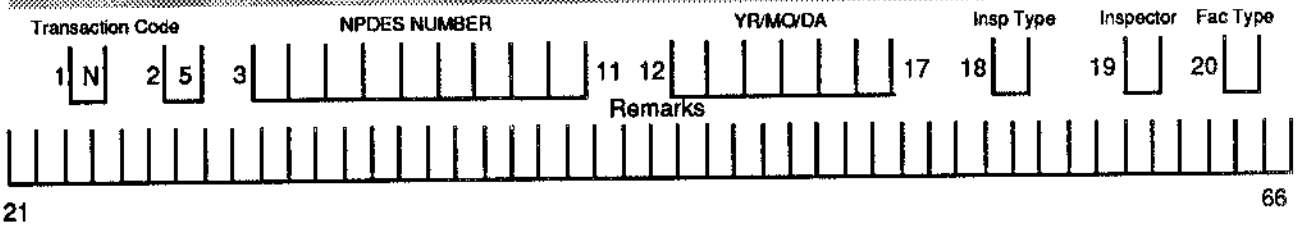
Water Quality Inspection (WQI)

Date Sampled: 27 November 1990

Results: While nutrients (especially phosphorus) were moderately enriched throughout the system, AGP at the test site was inhibited, probably due to toxic amounts copper present. AGP at both sites was indicative of eutrophy.

These fifth year inspections provide the necessary information to evaluate the facility's impact on its receiving waters and to provide the basis for specific condition recommendations for permit renewal.

Fill Out This Section For All Surface Water Discharger Inspections (CEI, CSI, CBI, PAI, XSI - RI Optional)



Fill Out This Section For All Surface Water Discharger Inspections (CEI, CSI, CBI, PAI, XSI - RI Optional)

