Wilson, Tabatha

From: Gilliam, Allen
Sent: Wednesday, May 14, 2014 1:59 PM
To: Wilson, Tabatha
Cc: Fuller, Kim
Subject: AR0020605_Danfoss ARP001040 April 2014 additional information requested by ADEQ_20140514
Attachments: 20140403115342731.pdf; 20140403115405200.pdf; 20140403115509996.pdf; 20140403115603054.pdf; 6168898_2.pdf; 6168898_1.pdf; Effluent_Sampling 2012.xls; Jan 2014.pdf; Feb 2014.pdf

To Pretreatent/Reports file:

Additional information requested after review of Danfoss' April 2014 semi-annual report.

Allen Gilliam
ADEQ State Pretreatment Coordinator
501.682.0625

E/NPDES/NPDES/Pretreatment/Reports

FINAL BASELINE MONITORING REPORT

Prepared
April 26, 1993

For

Carrier Corporation
One Scroll Drive
Clark County Industrial Park
Arkadelphia, Arkansas 71923

By

Industrial Engineering Associates, Inc.
P. O. Box 1461
North Little Rock, Arkansas 72215

T A B L E O F C O N T E N T S

INDUSTRIAL BASELINE MONITORING REPORT

Instructions: Please complete this form in as much detail as possible. Include additional information on attached sheets as necessary. Refer to the supplemental instructions and return this report to the address shown in the instructions.

(1) Identifying Information:

A. Legal Name: United Technologies Carrier
Mailing Address: One Scroll Drive
Clark County Industrial Park
Arkadelphia, Arkansas Zip: 71923

B. Facility Name: Same as Above
Location: Same as Above
Zip:

C. Name of Owners: United Technologies Carrier

D. Name of Operators: Carrier Corporation

E. Facility Contact (provide the name, title & phone number of a designated person to contact if additional information is necessary.) Jim Rumburg, Plant Engineer
Tel. (501) 246-0783

F. Number of Employees 400 G. Number of Shifts 4

H. Number of Months/Year in Operation 12 months/year

I. Provide the name of the publicly owned treatment works (sewerage authority, municipality, etc.) that receives the wastewater discharges from this facility (if this facility is not connected to a sewerage system describe where wastewater is discharged.) Arkadelphia Water and Sewer Utility, 601 Caddo Street, Arkadelphia, Arkansas 71923

J. Provide the date the facility began/will begin discharging to the publicly owned treatment works (sewerage authority, municipality, etc.) June 25, 1992
Date facility began operation April 4, 1993

(2) Permits:
Describe all environmental control permits held by or for the facility

Describe Title of the Permit	Permit No.	Issuing Office	Exp. Date
Air Pollution Control Permit	1223-A	ADPC&E	-
General Storm Water Permit	ARR00A000	ADPC&E	9/30/97
Hazardous Waste Generator ID	ARD980868491	ADPC&E	-

(3) Description of Operations:

A. List Raw Materials Used: Previously Submitted

B. List Chemicals Used: MSDS Previously Submitted, See Additional Information

C. Describe Manufacturing or Service Activities Conducted and the Final Products: The facility manufactures air conditioning compressors for use in residential and commercial HVAC systems

D. Summarize each Regulated Process: The regulated core process is coating (phosphating); the regulated unit processes are cleaning, grinding, machining and painting. All regulated process are described in the attached additional information.

Process Description	Production Rate	Pretreatment Standard Category	Subpart	SIC Code
1. Painting	-	433.17	A	3585
2. Phosphating	-	433.17	A	3585
3. Cleaning	-	433.17	A	3585
4. Grinding	-	433.17	A	3585
5. Machining	-	433.17	A	3585
6. Machining	-	433.17	A	3585

E. Provide on a separate sheet:

1) a schematic drawing of flow chart of each regulated process that generates wastewater. ATTACHED

2) a schematic drawing showing all wastewater flows (regulated and unregulated), location of any treatment system, and sampling locations and estimated flows for each individual wastestream. ATTACHED

3) a schemeatic process diagram which indicates points of discharge to the POTW from regulated processes. ATTACHED

(4). Flow Measurement:

A. Total Plant Flow in Gallons Per Day (gpd):

Average 33,403 Maximum 36,427

B. Individual Process Flows in Gallons Per Day (gpd) SEE ADDITIONAL INFORMATION

Regulated Process	Average Flow Rate (gpd)	Maximum Flow Rate (gpd)	Type of Discharge (Batch, etc)
1. Painting	26,057	28,800	Continuous
2. Phosphating	3,909	4,320	Continuous
3. Cleaning	3,909	4,320	Continuous
4. Grinding	825	900	Batch
5. Machining	433	6,500	Batch
6. Machining	30	300	Batch

Unregulated Process	Average FLow Rate (gpd)	Maximum Flow Rate (gpd)	Type of Discharge (Batch, etc.)
SEE ADDITIONAL INFORMATION			
Cooling Water	50	100	Continuous
Sanitary Wastewater	9,000	14,000	Continuous

(5) Measurement of Pollutants

A. Provide on a Separate Sheet:

1) The user shall identify the Pretreatment Standards applicable to each regulated process. ATTACHED

2) A description of any and all wastewater treatment utilized (show treatment system location in relation to process flows and sampling points on schematic drawing required by Question 3.E.).

ATTACHED

B. Analysis of Regulated Flows:
The industrial user must perform sampling and analysis of the effluent from all regulated processes (after treatment, if applicable). Provide the analytical data for the regulated processes in the space provided below. Attach additional sheets if necessary. (Only those pollutants specifically regulated by the applicable category need be reported.)

Regulated Process: Phosphating - (Alkaline/Phosphate Washer)

Pollutant (mg/l)											
Maximum											
Average											

Sample Location: _____

Sample Type (composite samples are required except where not feasible or where grab samples are specifically required (see 40 CFR 403.12(b)(5)(iii)): _____

Number of Samples and Frequency Collected: _____

Analytical Methods Used: _____

C. Analysis of Total Plant Flow (if appropriate) SEE ATTACHED CALCS. An industrial user may sample and analyze the total plant flow and calculate an equivalent concentration limit using the combined wastestream formula if regulated process flows are mixed with other flows prior to treatment and/or sampling. Record the analytical results for all regulated pollutants below. Record the calculated concentration limits as well as the actual measured concentrations.

Pollutant (mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	Cn	TTO		
MEC*	.109	2.73	3.33	.68	3.92	.42	2.57	1.18	2.10		
AEC*	.069	1.69	2.04	.42	2.35	.24	1.46	.64	-		
AMMC*	.004	.045	2.61	.06	1.40	.002	.923	.02	.30		
AAAC*	.002	.016	.513	.02	.566	.001	.355	.006	.131		

Sample Location: Final discharge from pretreatment system to sewer
Sample Type (composite samples are required except where not feasible or where grab samples are specifically required (see 40 CFR 403.12(b)(5)(iii)): Metals - composite, O&G, pH - grab
Number of Samples and Frequency Collected: 6 over six month period
Analytical Methods Used: See attached laboratory analyses

*MEC - Maximum Equivalent Concentration (derived through the combined wastestream formula)
*AEC - Average Equivalent Concentration (derived through the combined wastestream formula)
*AMMC - Actual Measured Maximum Concentration
*AAAC - Actual Measured Average Concentration

B. Analysis of Regulated Flows:
The industrial user must perform sampling and analysis of the effluent from all regulated processes (after treatment, if applicable). Provide the analytical data for the regulated processes in the space provided below. Attach additional sheets if necessary. (Only those pollutants specifically regulated by the applicable category need be reported.)

Regulated Process: Phosphating - (Alkaline/Phosphate Washer)

Pollutant (mg/l)											
Maximum											
Average											

Sample Location: _____

Sample Type (composite samples are required except where not feasible or where grab samples are specifically required (see 40 CFR 403.12(b)(5)(iii)): _____

Number of Samples and Frequency Collected: _____

Analytical Methods Used: _____

C. Analysis of Total Plant Flow (if appropriate) SEE ATTACHED CALCS.
An industrial user may sample and analyze the total plant flow and calculate an equivalent concentration limit using the combined wastestream formula if regulated process flows are mixed with other flows prior to treatment and/or sampling. Record the analytical results for all regulated pollutants below. Record the calculated concentration limits as well as the actual measured concentrations.

Pollutant (mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	Cn	TTO		
MEC*	.109	2.73	3.33	.68	3.92	.42	2.57	1.18	2.10		
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AMMC*	.004	.045	2.61	.06	1.40	.002	.923	.02	.30		
AAAC*	.002	.016	.513	.02	.566	.001	.355	.006	.131		

Sample Location: Final discharge from pretreatment system to sewer
Sample Type (composite samples are required except where not feasible or where grab samples are specifically required (see 40 CFR 403.12(b)(5)(iii)): Metals - composite, O&G, pH - grab
Number of Samples and Frequency Collected: 6 over six month period
Analytical Methods Used: See attached laboratory analyses

*MEC - Maximum Equivalent Concentration (derived through the combined wastestream formula)
*AEC - Average Equivalent Concentration (derived through the combined wastestream formula)
*AMMC - Actual Measured Maximum Concentration
*AAAC - Actual Measured Average Concentration

(6) Certification:

A. Is the facility meeting applicable categorical pretreatment standards on a consistent basis ? YES X NO _____

B. If no, do you require:

1) additional operation and maintenance (o&M) to achieve compliance? YES _____ NO _____

2) new or additional pretreatment facilities to achieve compliance? YES _____ NO _____

3) Name of Qualified Professional that reviewed this certification:

Name & Title William B. Denton, P.E. President
Industrial Engineering Associates, Inc.

Signature William B. Denton Date April 26, 1993

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No.5035 WILLIAM B. DENTON

(7) Compliance Schedule:

A. If additional O&M or new or additional pretreatment will be required to meet categorical pretreatment standards on a consistent basis, attach a schedule on a separate sheet projecting increments of progress indicating dates for the commencement and completion of major events leading to compliance with the standard. Note: the final compliance date in this schedule shall not be later than the compliance date for the applicable pretreatment standard. Written progress reports are required within 14 days of each of the compliance dates specified in the compliance schedule.

B. Signatory Requirement

I certify under penalty of law that I have personally examined and am familiar with the information in this Baseline Monitoring Report and all attachments, and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the report, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name - Authorized Representative	Signature
Geary Pope	
Official Title	Date
Plant Manager	

CERTIFICATION

RESOLVED, That the Chief Executive Officer of the Corporation be and he hereby is authorized to sign, execute and have executed all agreements, assignments, transfers, instruments, documents, guaranties, checks, notes, drafts, deeds, mortgages and obligations of every kind and description for and on behalf of the Corporation, without restriction or limitation; and

FURTHER RESOLVED, That the Chief Executive Officer be and he hereby is authorized to delegate signing authority under this resolution, through the Chief Operating Officer, when applicable, to officers, employees, counsel and others representing or acting for or on behalf of the Corporation; and

FURTHER RESOLVED, That the authority granted under this resolution shall continue until rescinded or revised by the Board of Directors of the Corporation.

* * * * * * * * * *

I, FRANCES K. LEPPARD, Assistant Secretary of Carrier Corporation, a Delaware corporation, certify that the foregoing resolutions were passed by unanimous consent of all the Directors of the Corporation in writing on December 1, 1984; that said resolutions are in full force and effect; and I further certify that the Chief Executive Officer, Karl J. Krapek, under the above resolutions has authorized and delegated authority to Richard M. Whiston, Vice President and General Counsel, and Secretary to sign, execute and have executed obligations of every kind and description on behalf of the Corporation and also received authority to further delegate.

I further certify that Richard M. Whiston has delegated his authority to Mr. Geary Pope, Plant Manager of the Arkadelphia Plant, to sign an air pollution control permit application with the State of Arkansas Department of Pollution Control and Ecology.

Dated as of September 9, 1991

Frances K. Leppard

Frances K. Leppard
Assistant Secretary

UNITED TECHNOLOGIES CARRIER

Carrier Corporation
Scroll Compressor Operations
One Scroll Drive
Clark County Industrial Park
Arkadelphia, Arkansas 71923

I certify, to the best of my knowledge, that the sampling and analysis as documented by Sorrells Research Laboratory (Name of laboratory here)

Report L277.001 (Lab ID/Control No.) dated January 13, 1993 (Date of Analysis) is representative of Carrier (Facility Name) normal work cycles and the expected pollutant Discharges to the City of Arkadelphia (Name of City), AR Publicly Owned Treatment Works.

William B. Denton
(Signature of qualified professional Adc 6 in BMR)

April 26, 1993
(Date signed)

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No.5035 WILLIAM B. DENTON

ADDITIONAL INFORMATION

Baseline Monitoring Report
Carrier Corporation
Arkadelphia, Arkansas

(1) Identifying Information

G. Number of Shifts:

The facility currently operates 4 shifts consisting of 2 - 10 hour shifts for 4 days per week and 2 -12 hour shifts for 3 days per week for a total of 152 hours per week of production time.

(2) Permits:

- Carrier has not been granted an industrial wastewater discharge permit by the Arkadelphia water and Sewer Utility. The Utility does not currently have a pretreatment program in place.
- The air pollution control permit is issued for the facility for the duration of Carrier Corporation ownership.
- The EPA Hazardous Waste Generator I.D. Number is site specific and remains assigned to the site regardless of changes in ownership.

(3) Description of Operations

B. List Chemicals Used: Carrier Corporation has previously submitted all MSDS for chemicals known to be used in the manufacturing process. Attachment 2 contains a MSDS for Indicator 8 and lists a xylene cyanole compound. This chemical is used in small quantities to determine iron presence in wash water in a laboratory setting and is not used in production processes.

D. Summarize Each Regulated Process: The core process is coating, specifically alkaline/phosphate washing. This core process, regulated unit processes, and dilute wastestreams are described in Attachment 3.

E. Schematic Flow Diagrams: Schematic flow diagrams for each regulated process, dilute wastestream and pretreatment system are contained in Attachment 4. A site plan drawing indicating the wastestream locations and point of discharge to the POTW is contained in Attachment 5.

(4) Flow Measurement

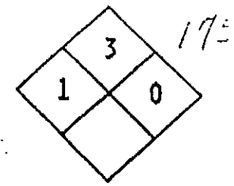
B. Individual Process Flows In Gallons Per Day: Attachment 6 contains estimated flow rates for each regulated and dilute wastestream. Additionally, the basis calculations for average and maximum total plant flow are presented.

(5) Measurement of Pollutants

C. Analysis of Total Plant Flow: As indicated on the schematic flow diagrams and drawings, all regulated and dilute wastestreams discharge into the pretreatment system. Since submission of the original BMR, Carrier has modified the pretreatment system to accept several dilute wastestreams (see Attachments 3,4, and 5). The common and only sampling point for all treated wastestreams is located at the discharge of the pretreatment system final pH adjustment tank. Cooling tower overflow enters the sanitary sewer downstream from the pretreatment system discharge to the sewer and is not considered to be a dilute wastestream in the combined wastestream formula (CWF). All laboratory analysis results are contained in Attachment 7, including an explanatory letter from Sorrells Research Laboratory regarding the analysis of 9/11/92. The CWF calculations are contained in Attachment 8.

Parker+Amchem

HENKEL CORPORATION
32100 Stephenson Highway
Madison Heights,Michigan 48071



17=

MATERIAL SAFETY DATA SHEET

CUSTOMER #

PRODUCT TRADE NAME	INDICATOR 8
DOT PROPER SHIPPING NAME	Flammable liquid, N.O.S., (contains Isopropanol), UN1993.
DOT HAZARD CLASSIFICATION	Flammable
TECHNICAL CONTACT (NAME)	Product Acceptance Office
TELEPHONE NUMBER	(313) 583-9300 EMERGENCY NUMBER 1-517-263-9430

1 HAZARDOUS INGREDIENTS

MATERIAL	CAS NO.	CONTENTS (% WT/WT)	HAZARD	TLV/PEL
Isopropyl Alcohol	67-63-0	17	Irritant/ Flammable	980 mg/m³* 980 mg/m³*
Methyl Orange/ Xylene Cyanole	62758-15-0	1-3	Toxic	None
Remainder-water				

*Isopropyl Alcohol STEL = 1225 mg/m³.

2 PHYSICAL DATA

APPEARANCE	Dark green liquid		
SOLUBILITY IN WATER	Complete		
ODOR	Alcohol	pH of CONCENTRATE	6 - 8
SPECIFIC GRAVITY	Approx. 1	BOILING POINT, °F.	Approx. 180°F *

OTHER: *for isopropyl alcohol

3 FIRE & EXPLOSION DATA

FLASH POINT 85°F

TEST METHOD C.C.

EXTINGUISHING MEDIA Carbon dioxide, water, foam or dry chemical.

UNUSUAL FIRE OR EXPLOSION HAZARDS

A moderate explosion hazard exists when this material is exposed to heat or flames.
Vapors may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, other flames and ignition sources at locations distant from material handling point.

SPECIAL FIRE FIGHTING PROCEDURES

Wear positive pressure self-contained breathing apparatus and full protective clothing.

4 REACTIVITY DATA

STABLE ☒ UNSTABLE ☐

CONDITIONS TO AVOID

None

INCOMPATIBLE MATERIALS

Keep separate from strong oxidizing agents.

HAZARDOUS POLYMERIZATION WILL OCCUR ☐
WILL NOT OCCUR ☒

CONDITIONS TO AVOID

None

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide

5 HEALTH HAZARD DATA

EYES: Will cause local irritation and burning sensations, with possible eye damage.

SKIN: Will cause stinging and burning sensation and possible irritation from prolonged.

INHALATION: Can cause mild irritation to nose and throat. Prolonged exposures can cause narcosis, nausea, headache and central nervous system depression.

INGESTION: Isopropyl alcohol is considered a poison. Methyl orange is toxic. (Oral-rat LD50 = 60 mg/kg)

No component of this chemical is listed in the NTP Annual Report on Carcinogens, IARC Monographs or is regulated as a carcinogen by OSHA.

6 FIRST AID RECOMMENDATIONS

EYES: Immediately flush eyes in a directed stream of water for at least 15 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. GET MEDICAL ATTENTION.

SKIN: Wash thoroughly with soap and water.

INGESTION: Drink large quantities of water. INDUCE VOMITING. GET MEDICAL ATTENTION. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air and remove contaminated clothing. If breathing is difficult, administer oxygen. If respiration stops, give mouth to mouth resuscitation. GET MEDICAL ATTENTION.

7 SPILL PROCEDURES & WASTE DISPOSAL

SPILL PROCEDURES

Ventilate area of spill. Remove all ignition sources.
Wear protective clothing.
Absorb on non-combustible material (vermiculite, sand, earth) and store in suitable drum.

WASTE TREATMENT

This chemical is a hazardous waste as defined by EPA Hazardous Waste and Consolidated Permit Regulations (or consult equivalent state regulations).
Hazardous Waste Characteristic: Ignitability, Title 40, Code of Federal Regulations 261.21, Hazardous Waste Number D001.
Dispose of in compliance with all applicable federal, state and local regulations.

8 PERSONAL PROTECTION

VENTILATION REQUIREMENTS	GENERAL AREA EXHAUST	☐
	LOCAL EXHAUST	☒ *
	NO EXHAUST NECESSARY	☐

PERSONAL PROTECTIVE EQUIPMENT	
EYE PROTECTION	Chemical goggles
SKIN PROTECTION	Neoprene or polyvinyl gloves and appropriate protective clothing.
RESPIRATORY PROTECTION	Not normally required. Provide sufficient mechanical (general and/or local exhaust ventilation to maintain exposure below TLV(s).
OTHER REQUIRED EQUIPMENT	Eye wash facility should be in close proximity.

9 SPECIAL PRECAUTIONS & STORAGE

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

DO NOT TAKE INTERNALLY.

Wash thoroughly after handling.

AVOID PROLONGED OR REPEATED BREATHING OF VAPOR.

For industrial use only.

PREPARED BY Product Acceptance Office DATE 08/28/90

TITLE

CHEMICAL EMERGENCY TELEPHONE 1-800-424-9300

PRETREATMENT SYSTEM WASTESTREAM DESCRIPTION

United Technologies Carrier
Arkadelphia, Arkansas

1. ELECTROCOAT PAINT SYSTEM, WASH PROCESS - Regulated wastestream is subject to the Pretreatment Standards for New Sources (PSNS) contained in 40 CFR 433.17 and consists of overflow from paint system preparatory wash and rinse sections which is collected in a common sump and pumped via overhead piping to the wastewater pretreatment system. Estimated average flow rate is approximately 20 gpm from 20 to 24 hours per day.

2. ALKALINE/PHOSPHATE WASHER - Regulated wastestream is subject to the Pretreatment Standards for New Sources (PSNS) contained in 40 CFR 433.17 and consists of overflow from parts washer and phosphating system which is collected and pumped via overhead piping to the wastewater pretreatment system. Estimated average flow rate is approximately 3 gpm from 20 to 24 hours per day.

3. ALKALINE WASHER - Regulated wastestream is subject to the Pretreatment Standards for New Sources (PSNS) contained in 40 CFR 433.17 and consists of overflow from parts washer system which is collected and pumped via overhead piping to the wastewater pretreatment system. Estimated flow rate is approximately 3 gpm from 20 to 24 hours per day.

4. METALS LAB - Regulated wastestream is subject to the Pretreatment Standards for New Sources (PSNS) contained in CFR 433.17 and consists of water contaminated from grinding and related metal preparation processes during metals quality assurance test procedures, collected in a sump, and pumped via overhead piping to the wastewater pretreatment system. Estimated flow is based on a periodic pumping rate of 5 gpm for 15 minutes per hour from 10 to 12 hours per day.

5. MACHINING COOLANT, CENTRAL SYSTEM - Regulated wastestream is subject to the Pretreatment Standards for New Sources (PSNS) contained in 40 CFR 433.17 and consists of 13,000 gallon batches of contaminated central machining coolant. The coolant is recirculated from a central storage tank located adjacent to the wastewater pretreatment system to each of the machines requiring coolant. When coolant is considered unusable

PRETREATMENT SYSTEM WASTESTREAM DESCRIPTION (cont.)

it is transferred to storage tanks with sufficient capacity to store the entire plant coolant volume and located under the wastewater pretreatment system. Spent coolant will be pumped from the storage tanks at an estimated flow rate of 4.5 gpm from 1 to 3 times per year and treated in the wastewater pretreatment system over a period of 2 days. Assuming a 30 day treatment period, the average estimated daily flow to the pretreatment system is 433 gallons per day.

6. MACHINING COOLANT, SUMPS - Regulated wastestream is subject to the Pretreatment Standards for New Sources (PSNS) contained in 40 CFR 433.17 and consists of 15 machine sump batches varying from 30 to 300 gallon capacity containing machining coolant contaminated with metals and oil. When machine coolant is determined to be unusable, it is transferred to drums and transported to the Alkaline Washer pump sump in batches. Spent coolant will be pumped from the sump at an estimated flow rate of 300 gpd and treated in the wastewater pretreatment system.

7. NORTH TRUCK DOCK SUMP - Dilute wastestream consists of floor washer tank liquids and rinsate from triple rinsing of empty drum containers of sulfuric acid, sodium hydroxide, and machine coolant. The liquids are collected in a covered sump and pumped overhead to the wastewater pretreatment system. The average flow is estimated to be 150 gpd from floor washer tanks and 70 gpd from drum rinsing.

8. EAST TRUCK DOCK SUMP - Dilute wastestream consists of drainage from a metal cuttings container contaminated with metals and oil. The liquids are collected in a covered sump and pumped overhead to the wastewater pretreatment system. The average flow is estimated to be 140 gpd.

9. MOP SINK, HOUSEKEEPING - Dilute wastestream consists of drainage from a janitorial mop sink with potential for contamination from floor mops containing metals and oil. The liquids are collected in a sump and pumped overhead to the wastewater pretreatment system. The average flow is based on approximately 10 buckets per day and estimated to be 6 gpd.

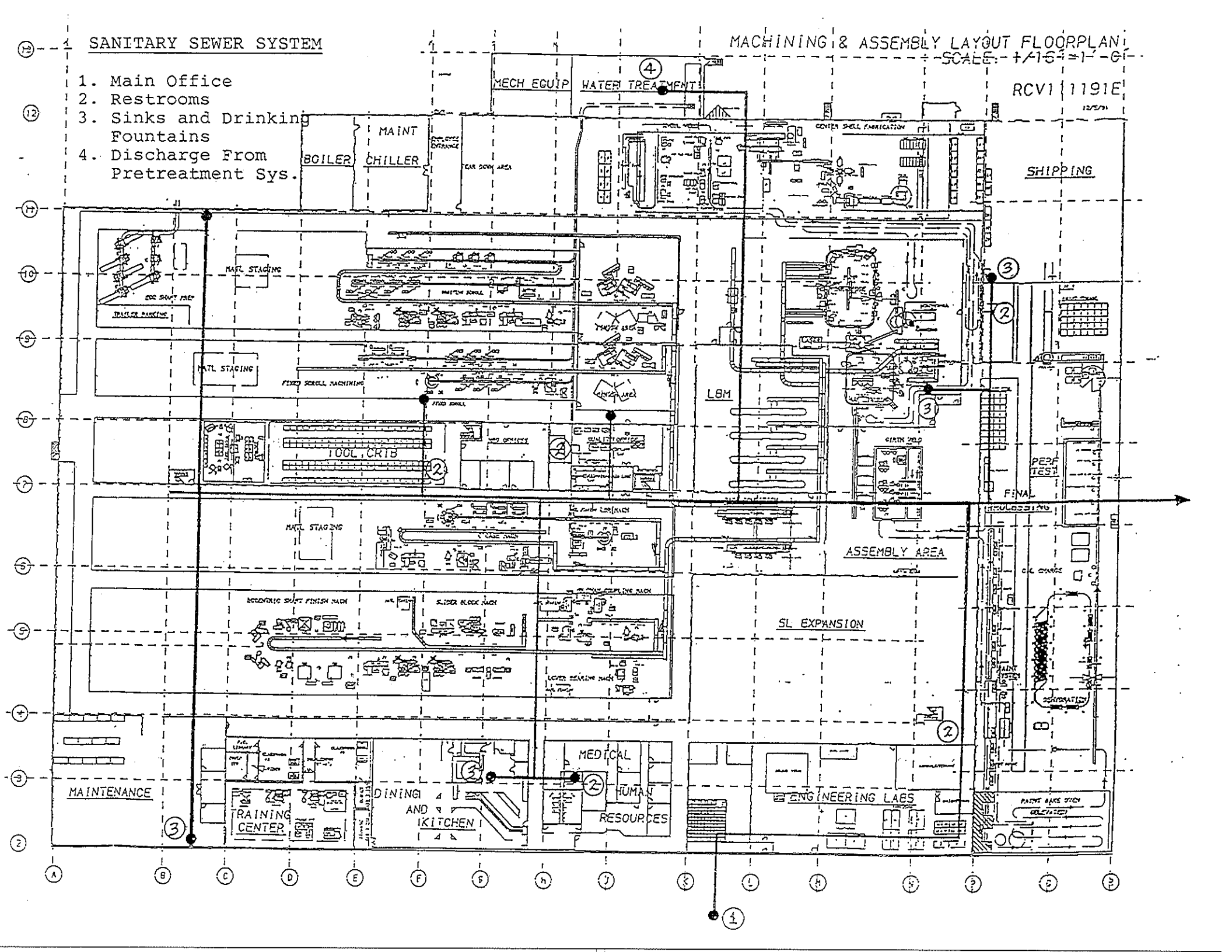
PRETREATMENT SYSTEM WASTESTREAM DESCRIPTION (cont.)

10. CHILLER SUMP - Dilute wastestream consists of condensate drainage from a centrifugal chiller system contaminated with oil. The liquids are collected in a sump and pumped overhead to the wastewater pretreatment system. The average flow is estimated to be 30 gpd.

11. AIR COMPRESSOR CONDENSATE, 9-K - Dilute wastestream consists of drainage from air compressor condensate contaminated with oil. The liquids are collected in a sump and pumped overhead to the wastewater pretreatment system. The average flow is estimated to be 5 gpd.

12. AIR COMPRESSOR CONDENSATE, 12-H - Dilute wastestream consists of drainage from air compressor condensate contaminated with oil. The condensate drains to a sump which drains to storage tanks located in the basement area beneath the pretreatment system. The tank contents are pumped to the wastewater pretreatment system. The average flow is estimated to be 5 gpd.

13. OIL STORAGE TANK SECONDARY CONTAINMENT - Dilute wastestream consists of stormwater collected in a concrete secondary containment and potentially contaminated with oil. The liquids are manually pumped overhead to the wastewater pretreatment system. Based on an annual rainfall of 48 inches and a containment size of 1160 sq. ft., the average daily flow is estimated to be 95 gpd.


SANITARY SEWER SYSTEM
1. Main Office
2. Restrooms
3. Sinks and Drinking Fountains
4. Discharge From Pretreatment Sys.
MACHINING & ASSEMBLY LAYOUT FLOORPLAN
SCALE: 1/16" = 1'-0"
RCV1 1191E
MECH EQUIP
WATER TREATMENT
MAINT
BOILER
CHILLER
SHIPPING
MATL STAGING
LBM
TOOL CRIB
ASSEMBLY AREA
SL EXPANSION
MAINTENANCE
TRAINING CENTER
DINING AND KITCHEN
MEDICAL
HUMAN RESOURCES
ENGINEERING LABS

BASIS FOR TOTAL PLANT FLOW
Carrier Corporation

Facility water intake did not reflect expected usage until production operations approached normal levels during October of 1992. Total water usage is based on billing records from Arkadelphia Water Utility for the third quarter of 1992 as follows:

Month	Year	Consumption Gallons/Month
October	1992	1,092,800
November	1992	1,039,900
December	1992	873,600
	TOTAL	3,006,300

$$\text{Average Usuage} = \frac{3{,}006{,}300 \text{ gal}}{3 \text{ months}}$$

$$= 1{,}002{,}100 \text{ gal/month}$$

$$\frac{1{,}002{,}100 \text{ gal/month}}{30 \text{ days/month}} = 33{,}403 \text{ gal/day}$$

$$\text{Maximum Usage} = \frac{1{,}092{,}800 \text{ gal/month}}{30 \text{ days/month}}$$

$$= 36{,}427 \text{ gal/month}$$

ESTIMATED WASTESTREAM FLOWRATES
Carrier Corporation
Arkadelphia, Arkansas

Note: Flows expressed in gallons per day

SOURCE NUMBER	DESCRIPTION	ESTIMATED DAILY AVERAGE FLOW	ESTIMATED DAILY MAX FLOW	WASTE STREAM TYPE
1	Electrocoat Paint System Process: continuous Contaminant: metals	26,057	28,800	REG
2	Alkaline/Phosphate Washer Process: continuous Contaminant: metals	3,909	4,320	REG
3	Alkaline Washer Process: continuous Contaminant: metals	3,909	4,320	REG
4	Metals Laboratory Process: Intermittent Contaminant: metals	825	900	REG
5	Machining Coolant Central System 13,000 gallons Process: Batch Contaminant: metals, oil	433	6,500	REG
6	Machining Coolant Machine Sumps (15) 30 - 300 gal sumps Process: Batch Contaminant: metals, oil	30	300	REG
7	North Truck Dock Sump Process: Intermittent Contaminant: acids, bases, oil	220	280	DILUTE
8	East Truck Dock Sump Process: Intermittent Contaminant: metals, oil	140	280	DILUTE

ESTIMATED WASTESTREAM FLOWRATES

SOURCE NUMBER	DESCRIPTION	ESTIMATED DAILY AVERAGE FLOW	ESTIMATED DAILY MAX FLOW	WASTE STREAM TYPE
9	Mop Sink, Housekeeping Process: Intermittent Contaminant: metals, oil	6	10	DILUTE
10	Chiller Sump Process: Intermittent Contaminant: oil	30	50	DILUTE
11	Air Compressor Condensate 9-K Process: Intermittent Contaminant: oil	5	10	DILUTE
12	Air Compressor Condensate 12-H Process: Intermittent Contaminant: oil	5	10	DILUTE
13	Oil Storage Tank Secondary Containment Process: Intermittent Contaminant: oil	95	2863	DILUTE
		35,664 gpd	48,643 gpd	

Total Estimated Average Daily Regulated Flow = 35,163 gpd

Total Estimated Average Daily Dilute Flow = 501 gpd

Total Estimated Average Daily Flow Through Pretreatment System = 35,664 gpd

Note: Wastewater Pretreatment System maximum capacity is 50,400 gpd based on 35 gpm and 24 hour operation.

CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS

UTCCLETA.93
SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES

WEF

6002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139
FAX (501) 562-7025

DATE: APRIL 16, 1993

ATTN: MR. MIKE DUMAS

UNITED TECHNOLOGIES CARRIER CORPORATION

ON SCROLL DRIVE

ARKADELPHIA, AR 71923

REF: REPORT DATED JANUARY 13, 1993

DEAR MR. DUMAS,

THIS IS IN REFERENCE TO THE ANALYSES THAT WERE MISSING ON YOUR REPORT:

BHC, DELTA

4,4,-DDD

2,3,7,8-TCDD

THESE PARAMETERS WERE ANALYZED WITH THE TTO , THE COMPUTER LIST DID NOT ADD THEM TO YOUR REPORT. WE ADDED THEM AND FAXED YOUR REPORT TO YOU.

IF YOU NEED ANYTHING ELSE, PLEASE CONTACT US.

Debra K. Sorrells

DEBRA K. SORRELLS,

OFFICE MANAGER

EFFLUENT SAMPLING LOG
Laboratory Results
ANALYTE (DAILY MAX (MG/L))

DATE	CADMIUM (.11)	CHROMIUM (2.77)	COPPER (3.38)	CYANIDE (1.2)	LEAD (.69)	NICKEL (3.98)	OIL/GRSE (52)	PH (6–9)	SILVER (.43)	ZINC (2.61)	TSS (60)	TTO (2.13)
8-5-92	.0011	<.001	.026	<.004	.0011	.011	5.4	*	<.0002	.01839	*	.3
8-27-92	.0012	<.001	.126	<.004	.001	1.404	15.5	7.38	<.0002	.33	14	.108
9-2-92	.0018	.008	.017	<.004	.0257	.081	6.5	7.38	<.0002	.103	7.2	.032
11-17-92	.00329	.045	.192	*	.0596	.146	28.6	*	.0002	.470	*	*
11-18-92	.0047	.041	2.606	.002	.0032	.389	106	3.42	.0018	.923	42	.175
1-13-93	.0015	.001	.109	.02	.025	1.365	11.3	8.3	.0002	.284	14.2	.040
MAX	.0047	.045	2.606	.02	.059	1.404	106	3.42	.0018	.923	42	.3
AVERAGE	.0023	.016	0.513	.006	.019	.566	28.88	6.62	.0005	.355	19.35	.131

Note: Unless otherwise noted, sample types are: PH, Oil & Grease –Grab; All others – 24 Hour Composite.

CHAIN OF CUSTODY RECORD

LAB# 1553?.001

NAME OF COMPANY, CITY, OR PROJECT: CernerCorp Arkadelphia					SAMPLERS: (signature) Karl	
SAMPLE COLLECTION LOCATION	DATE	TIME	COMP	GRAB	NO. OF CONTAINERS	ANALYSIS REQUIRED
	8-5			X	1-metals → Cd, Cr, Cu, Pb, Ni, Ag, Zn,	
"	"	"		X	(Cyanide)	(N<2)
"	"	"		X	1-O+G	(S<2)
"	"	"		X	1-½	TSS
					1-LATC	TTO

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	DATE/TIME
	Karl [signature]	8-5-92
DISPATCHED BY: (signature)	RECEIVED FOR LABORATORY BY:	DATE/TIME
	[signature]	8-5-92 1530

Method of Shipment:
(CIRCLE ONE) UPS BUS WALK-IN (SRA COURIER) OTHER COURIER

NOTES: STANDARD METHODS PRESERVATION per EPA 40 CFR part 136 — P.H. -

SHOW PRESERVATION; e.g.: C 4 = cool to 4.C. — Temp -

S<2 = Sulfuric Acid to pH < 2.
N<2 = Nitric Acid to pH < 2. — Flow -

(T) = Thiosulfate for dechlorination
SHOW EACH TYPE CONTAINER ON SEPARATE LINE. — Cl2 -

D.O. —

SORRELLS RESEARCH ASSOCIATES, INC.
(501) 562-8139

#1

SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES

CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

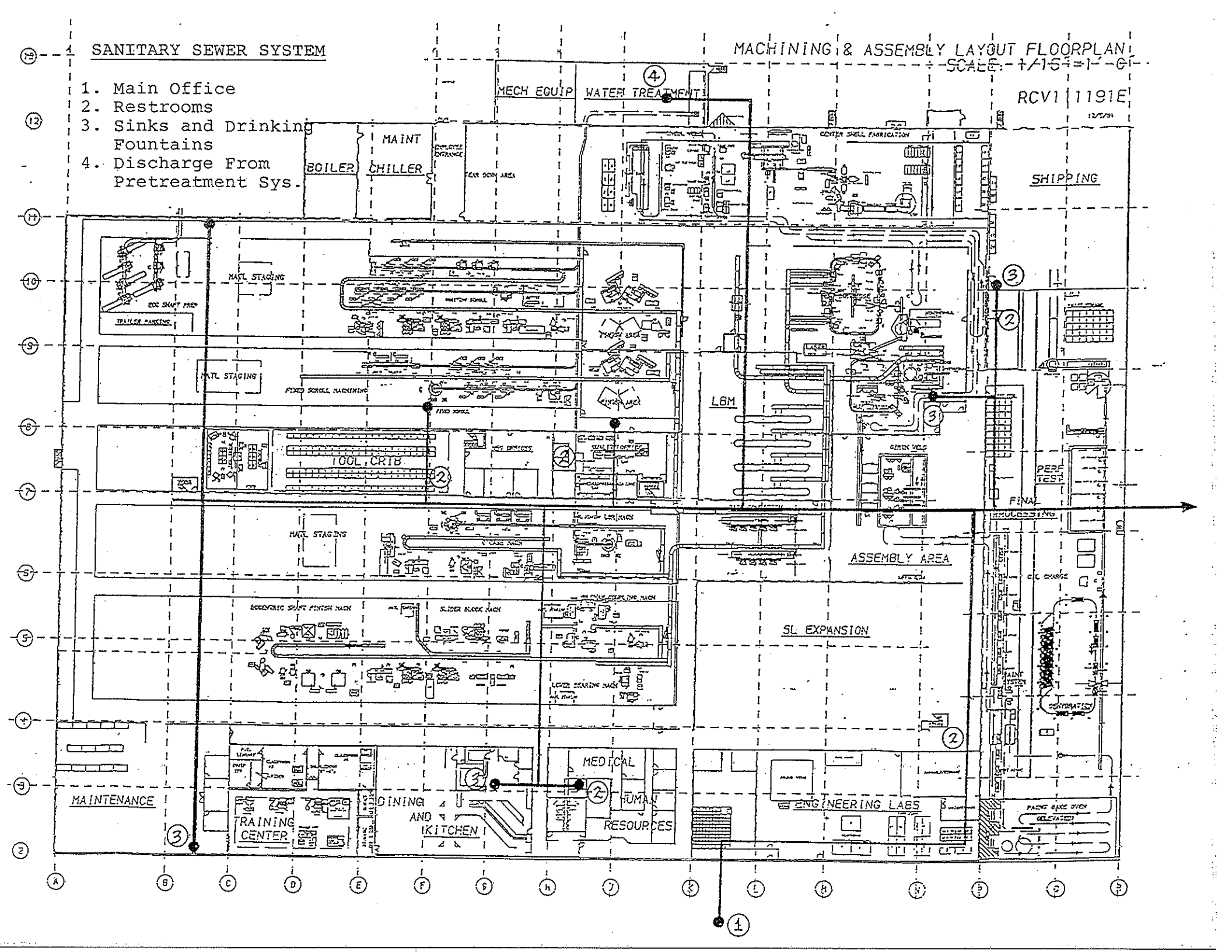
(501) 562-8139

LABORATORY ANALYSIS

Date of Report: August 18, 1992
Date Received : August 5, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: WASTE TREATMENT ROOM. EFFLUENT. TTO = .3 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Acrolein	<	1.000	ug/Liter	624
Acrylonitrile	<	1.000	ug/Liter	624
Benzene	<	0.200	ug/Liter	624
Bromoform	<	0.200	ug/Liter	624
Carbon tetrachloride	<	0.200	ug/Liter	624
Chlorobenzene	<	0.200	ug/Liter	624
Chlorodibromomethane		0.200	ug/Liter	624
Chloroethane	<	0.200	ug/Liter	624
Chloroethylvinyl ether, 2-	<	0.200	ug/Liter	624
Chloroform		13.000	ug/Liter	624
Dichlorobromomethane		2.100	ug/Liter	624
Dichloroethane, 1,1-	<	0.200	ug/Liter	624
Dichloroethane, 1,2-	<	0.200	ug/Liter	624
Dichloroethylene, 1,1-	<	0.200	ug/Liter	624
Dichloropropane, 1,2-	<	0.200	ug/Liter	624
Dichloropropylene, cis-1,3-	<	0.200	ug/Liter	624
Dichloropropylene, trans-1,3-	<	0.200	ug/Liter	624
Ethylbenzene		0.900	ug/Liter	624
Methyl bromide	<	0.200	ug/Liter	624
Methyl chloride	<	0.200	ug/Liter	624
Methylene chloride		1.000	ug/Liter	624
Tetrachloroethane, 1, 1, 2, 2	<	0.200	ug/Liter	624
Tetrachloroethylene	<	0.200	ug/Liter	624
Toluene		36.300	ug/Liter	624
Dichloroethylene, cis-1,2-	<	0.200	ug/Liter	624
Dichloroethylene, trans-1,2-	<	0.200	ug/Liter	624
Trichloroethane, 1, 1, 1-		0.400	ug/Liter	624
Trichloroethane, 1, 1, 2-	<	0.200	ug/Liter	624
Trichloroethylene	<	0.200	ug/Liter	624
Vinyl chloride	<	0.200	ug/Liter	624
Chlorophenol, 2-	<	10.000	ug/Liter	625
Dichlorophenol, 2,4-	<	10.000	ug/Liter	625
Dimethylphenol, 2,4-	<	10.000	ug/Liter	625


SANITARY SEWER SYSTEM
1. Main Office
2. Restrooms
3. Sinks and Drinking Fountains
4. Discharge From Pretreatment Sys.
MACHINING & ASSEMBLY LAYOUT FLOORPLAN
SCALE: 1/16" = 1'-0"
RCV1 1191E
MECH EQUIP
WATER TREATMENT
MAINT
BOILER
CHILLER
SHIPPING
MATL STAGING
TOOL CRIB
LBM
ASSEMBLY AREA
SL EXPANSION
MAINTENANCE
TRAINING CENTER
DINING AND KITCHEN
MEDICAL
HUMAN RESOURCES
ENGINEERING LABS

SORRELLS RESEARCH
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CHEMISTS
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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: August 18, 1992
Date Received : August 5, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: WASTE TREATMENT ROOM. EFFLUENT. TTO = .3 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Dinitro-o-cresol,4,6-	<	50.000	ug/Liter	625
Dinitrophenol, 2,4-	<	1.000	ug/Liter	625
Nitrophenol, 2-	<	10.000	ug/Liter	625
trophenol, 4-	<	50.000	ug/Liter	625
chloro-m-cresol	<	10.000	ug/Liter	625
Pentachlorophenol	<	10.000	ug/Liter	625
Phenol	<	10.000	ug/Liter	625
Trichlorophenol, 2, 4, 6-	<	10.000	ug/Liter	625
Acenaphthene	<	1.000	ug/liter	625
Acenaphthylene	<	1.000	ug/Liter	625
Anthracene	<	1.000	ug/Liter	625
Benzidine	<	50.000	ug/Liter	625
Benzo (a) anthracene	<	1.000	ug/Liter	625
Benzo (a) pyrene	<	1.000	ug/Liter	625
Benzofluoranthene, 3,4-	<	1.000	ug/Liter	625
Benzo (g,h,i) perylene	<	1.000	ug/Liter	625
Benzo (k) fluoranthene	<	1.000	ug/Liter	625
Bis (2-chloroethoxy) methane	<	10.000	ug/Liter	625
Bis (2-chloroethyl) ether	<	10.000	ug/Liter	625
Bis (2-chloroisopropyl) ether	<	10.000	ug/Liter	625
Bis (2-ethylhexyl) phthalate		254.000	ug/Liter	625
Bromophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
Butylbenzyl phthalate	<	10.000	ug/Liter	625
Chloronaphthalene, 2-	<	10.000	ug/Liter	625
Chlorophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
Chrysene	<	1.000	ug/Liter	625
Dibenzo (a,h) anthracene	<	1.000	ug/Liter	625
Dichlorobenzene, 1,2-	<	0.200	ug/Liter	624
Dichlorobenzene, 1,3-	<	0.200	ug/Liter	624
Chlorobenzene, 1,4-	<	0.200	ug/Liter	624
Dichlorobenzidine, 3,3-	<	50.000	ug/Liter	625
Diethylphthalate	<	10.000	ug/Liter	625
Dimethylphthalate	<	10.000	ug/Liter	624

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LABORATORY AND FIELD SERVICES

WPCF

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: August 18, 1992
Date Received : August 5, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: WASTE TREATMENT ROOM. EFFLUENT. TTO = .3 MG/LITER

ANALYTE	RESULT	UNITS	METHOD

Collected by:
MIKE DUMAS on 08/05/92 at 8:00
Analysis by :
K. E. Sorrells, M.S./Cecil A. Sorrells/K. E. Sorrells II/Ben W. Glover

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C.& E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained.
See Attached.

Copies to:
MIKE DUMAS
FACILITIES ENGINEER
ONE SCROLL DRIVE
CARRIER CORPORATION
ARKADELPHIA, AR 71923-

Laboratory Number: K531.001 DKS Reviewed By: K. E. Sorrells, M.S. [ ]

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: August 18, 1992
Date Received : August 5, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: WASTE TREATMENT ROOM. EFFLUENT. TTO = .3 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
i-n-butyl phthalate	<	10.000	ug/Liter	625
Dinitrotoluene, 2,4-	<	10.000	ug/Liter	625
initrotoluene, 2,6-	<	10.000	ug/Liter	625
i-n-octyl phthalate	<	10.000	ug/Liter	625
phenylhydrazine, 1,2-	<	10.000	ug/Liter	625
Fluoranthene	<	1.000	ug/Liter	625
luorene	<	1.000	ug/Liter	625
exachlorobenzene	<	10.000	ug/Liter	625
Hexachlorobutadiene	<	10.000	ug/Liter	625
exachlorocyclopentadiene	<	10.000	ug/Liter	625
exachloroethane	<	10.000	ug/Liter	625
Indeno (1,2,3-Cd) pyrene	<	1.000	ug/Liter	625
sophorone	<	10.000	ug/Liter	625
aphthalene	<	1.000	ug/Liter	625
Nitrobenzene	<	10.000	ug/Liter	625
N-nitrosodimethylamine	<	10.000	ug/Liter	625
-nitrosodi-n-propylamine	<	10.000	ug/Liter	625
-nitrosodiphenylamine	<	10.000	ug/Liter	625
Phenanthrene	<	1.000	ug/Liter	625
yrene	<	1.000	ug/Liter	625
richlorobenzene, 1, 2, 4-	<	10.000	ug/Liter	625
Aldrin	<	10.000	ug/Liter	625
HC, Alpha	<	10.000	ug/Liter	625
HC, Beta	<	10.000	ug/Liter	625
HC, Gamma	<	10.000	ug/Liter	625
Chlordane	<	10.000	ug/Liter	625
, 4'-DDT	<	10.000	ug/Liter	625
, 4'-DDE	<	10.000	ug/Liter	625
Dieldrin	<	10.000	ug/Liter	625
dosulfan, Alpha-	<	10.000	ug/Liter	625
dosulfan, Beta-	<	10.000	ug/Liter	625
Endosulfan sulfate	<	10.000	ug/Liter	625
ndrin	<	10.000	ug/Liter	625

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(501) 562-8139

LABORATORY ANALYSIS

Date of Report: August 18, 1992
Date Received : August 5, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: WASTE TREATMENT ROOM. EFFLUENT. TTO = .3 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Endrin aldehyde	<	10.000	ug/Liter	625
Heptachlor	<	10.000	ug/Liter	625
Heptachlor epoxide	<	10.000	ug/Liter	625
PCB-1016	<	10.000	ug/Liter	625
PCB-1221	<	10.000	ug/Liter	625
PCB-1232	<	10.000	ug/Liter	625
PCB-1242	<	10.000	ug/Liter	625
PCB-1248	<	10.000	ug/Liter	625
PCB-1254	<	10.000	ug/Liter	625
PCB-1260	<	10.000	ug/Liter	625
Toxaphene	<	10.000	ug/Liter	625
Cadmium		1.100	ug/Liter	213.2
Chromium	<	1.000	ug/Liter	218.2
Copper		26.000	ug/Liter	303A
Lead		1.100	ug/Liter	304
Nickel		11.000	ug/Liter	249.1
Silver	<	0.200	ug/Liter	272.2
Zinc		18.390	ug/Liter	289.2
Oil and grease		5.400	mg/Liter	503A
Total suspended solids	P	0.000	mg/Liter	209D
pH	P	0.000	units	423
Cyanide	<	0.004	mg/Liter	412C

CHAIN OF CUSTODY RECORD 4/1017

LAB# K627.001

NAME OF COMPANY, CITY, OR PROJECT: United Technologies Carrier Philadelphia

SAMPLER: (signature) Karl

SAMPLE COLLECTION LOCATION	DATE	TIME	COMP	GRAB	NO. OF CONTAINERS	ANALYSIS REQUIRED
EFF	8-27	11:40	X		1½	
"			X		1 TTO	1 Set Vials
"			X		1 Phenols	1 Cyanide
"			X		1 metals	1 NH3
"				X	10+G	
(48 hour Comp.)						

RELINQUISHED BY: (signature) X Mike Dunn

RECEIVED BY: (signature) Karl Scott 8-27-92 2:50

DISPATCHED BY: (signature)

RECEIVED FOR LABORATORY BY: DATE/TIM

Method of Shipment: (CIRCLE ONE) UPS BUS WALK-IN SRA COURIER OTHER COURIER

NOTES: STANDARD METHODS PRESERVATION per EPA 40 CFR part 136

SHOW PRESERVATION; e.g.: C 4 = cool to 4.C.
S(2 = Sulfuric Acid to pH < 2.
N(2 = Nitric Acid to pH < 2.
(T) = Thiosulfate for dechlorination
SHOW EACH TYPE CONTAINER ON SEPARATE LINE.

P.H. - 7.38
Temp - 18.5°
Flow -
CL2 -
D.O. -

SORRELLS RESEARCH ASSOCIATES, INC.
(301) 562-8139

C O L

#2

SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES

CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: September 8, 1992
Date Received : August 27, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: EFFLUENT. (48 HOUR COMP.) TOTAL TOXIC ORGANICS = .108 MG/L

ANALYTE		RESULT	UNITS	METHOD
Acrolein	<	1.000	ug/Liter	624
Acrylonitrile	<	1.000	ug/Liter	624
Benzene		0.300	ug/Liter	624
Bromoform	<	0.200	ug/Liter	624
Carbon tetrachloride	<	0.200	ug/Liter	624
Chlorobenzene		0.200	ug/Liter	624
Chlorodibromomethane	<	0.200	ug/Liter	624
Chloroethane	<	0.200	ug/Liter	624
Chloroethylvinyl ether, 2-	<	0.200	ug/Liter	624
Chloroform		6.200	ug/Liter	624
Dichlorobromomethane		1.000	ug/Liter	624
Dichloroethane, 1,1-		0.100	ug/Liter	624
Dichloroethane, 1,2-	<	0.200	ug/Liter	624
Dichloroethylene, 1,1-		0.400	ug/Liter	624
Dichloropropane, 1,2-	<	0.200	ug/Liter	624
Dichloropropylene, cis-1,3-	<	0.200	ug/Liter	624
Dichloropropylene, trans-1,3-	<	0.200	ug/Liter	624
Ethylbenzene		0.600	ug/Liter	624
Methyl bromide	<	0.200	ug/Liter	624
Methyl chloride	<	0.200	ug/Liter	624
Methylene chloride		1.600	ug/Liter	624
Tetrachloroethane, 1, 1, 2, 2	<	0.200	ug/Liter	624
Tetrachloroethylene		0.100	ug/Liter	624
Toluene		17.450	ug/Liter	624
Dichloroethylene, cis-1,2-	<	0.200	ug/Liter	624
Dichloroethylene, trans-1,2-	<	0.200	ug/Liter	624
Trichloroethane, 1, 1, 1-		6.400	ug/Liter	624
Trichloroethane, 1, 1, 2-	<	0.200	ug/Liter	624
Trichloroethylene		0.800	ug/Liter	624
Vinyl chloride	<	0.200	ug/Liter	624
Chlorophenol, 2-	<	10.000	ug/Liter	625
Dichlorophenol, 2,4-	<	10.000	ug/Liter	625
Dimethylphenol, 2,4-	<	10.000	ug/Liter	625

117971 DSCT- 2525170001

CAL-CORR Services and Repairs
CERTIFICATE OF CALIBRATION

Certificate/Work Order Number: 18311	Page 1 of 2

Name /Address of Laboratory:

Cal-Corr Services and Repairs
25540 Pennsylvania Road
Taylor, MI 48180
Telephone: 734-942-0900
FAX: 734-942-7678

Customer Name and Address:

Name: TRESCAL
Street Address: 1200 N OLD US 23
City: HARTLAND State: MI Zip Code: 48353
Telephone: (810) 225-4601
FAX: (810) 225-4602

Calibration Date:01-17-2014

Description of Device to be Calibrated

Type of Device: FLOW METER
Manufacturer: MASTER METER
Model Number: 3 INCH
Serial Number: 6168898

LABORATORY ACCREDITATION BUREAU *ACCREDITED*
Cert # L2010-1 Calibration

As Found and As Left Readings: See attached ***Flowmeter Calibration Report.***
Measurement Uncertainty is reported as an expanded uncertainty expressed at approximately the 95% confidence level using a coverage of k=2.

Cal-Corr Services and Repairs certifies that the above device, covered by this certificate, is certified in accordance with ISO/IEC 17025 and has been calibrated or compared with Master Reference Standards that are traceable to the National Institute of Standards and Technology. The traceability of this certificate is achieved through the unbroken chain of calibrations through the use of accredited sources providing uncertainty measurement back to NIST to the International System of Units (SI units):

Calibration Method:# 2

Uncertainty of Measurement:
+/- 0.22% of reading

Calibration Standards Used:

I.D. Number: S/N C57983-1 through C57983-4, PN82282C-1 through PN82282C-3 (Certificate # 586867), S/N 5100 (Certificate # 1986), S/N 870626004 (Certificate #1987) S/N 6409-A (Certificate #1988), Calibration Weights (Certificate #MI-11-12-11256)

Technical Manager

Calibration Technician

CAL-CORR
SERVICES & REPAIRS

An Operating Group of North Central Engineering, Inc.

Complete calibration, correlation
and repair service of Flowmeters

ISO/IEC 17025 Accredited

Customer:	Trescal	**Date:**	January 17, 2014
Purchase Order:	086508-03	**Job:**	18311
Manufacturer:	Master Meter	**Serial #:**	6168898
Model:	3 Inch	**Density**:	8.328 / gallon
Calibration Fluid:	Water	**Data Units:**	Gallons
Viscosity:	0.997 CTKS	**Temperature:**	80.5 °F

Scale Reading Gallons	**Actual Flow Gallons**
0.50	0.520
1.00	1.057
5.00	5.026

END OF REPORT **PAGE 2 OF 2**

Calibration Specialist _____ **Date** 01-17-2014

25540 Pennsylvania Road Taylor, Michigan 48180-6417

Phone: (734) 942-0900 Fax: (734) 942-7678 E-mail: calcorrservices@nceng.com www.nceng.com

Figure 3.7 - COMBINED WASTESTREAM FLOW SCHEMATIC

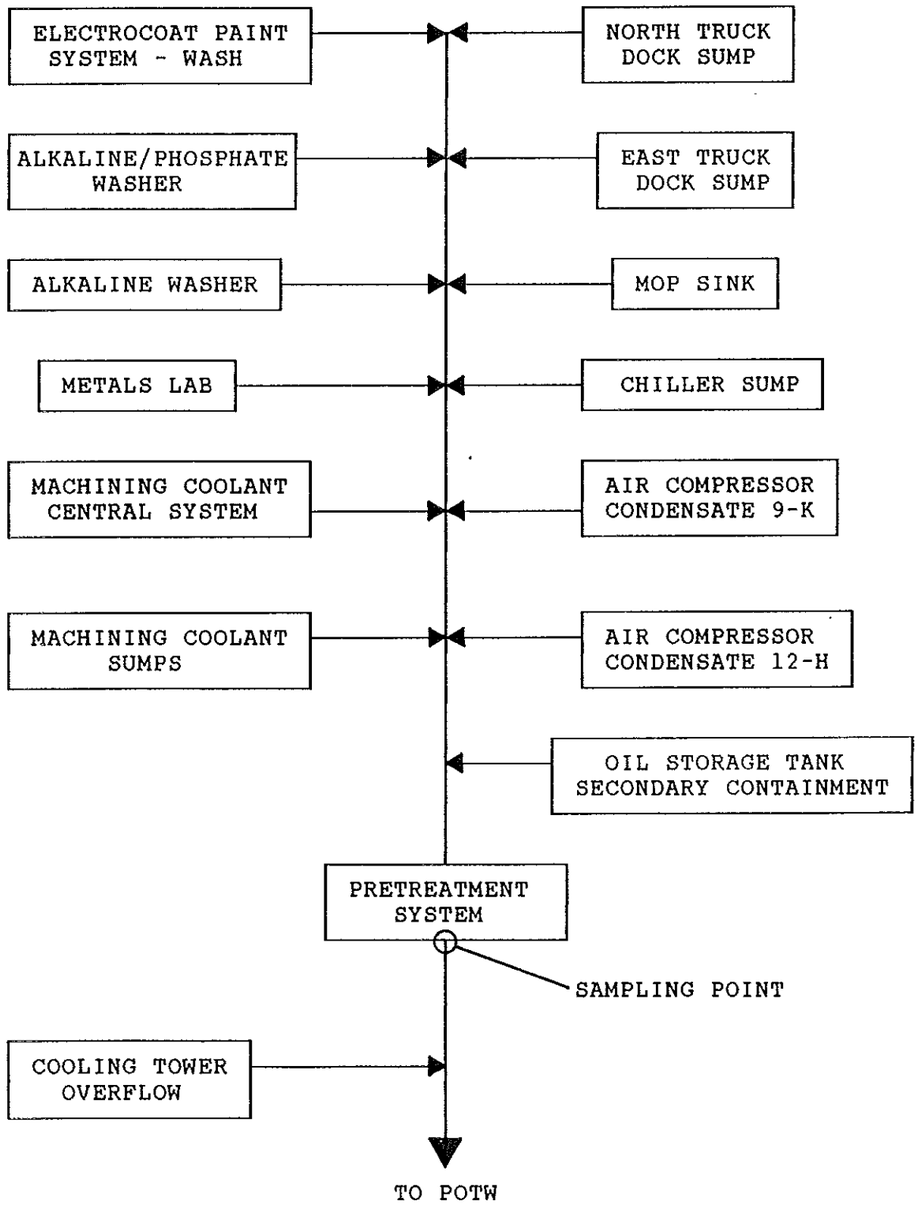


Figure 3.1 - **ALKALINE/PHOSPHATE WASH PROCESS SCHEMATIC**

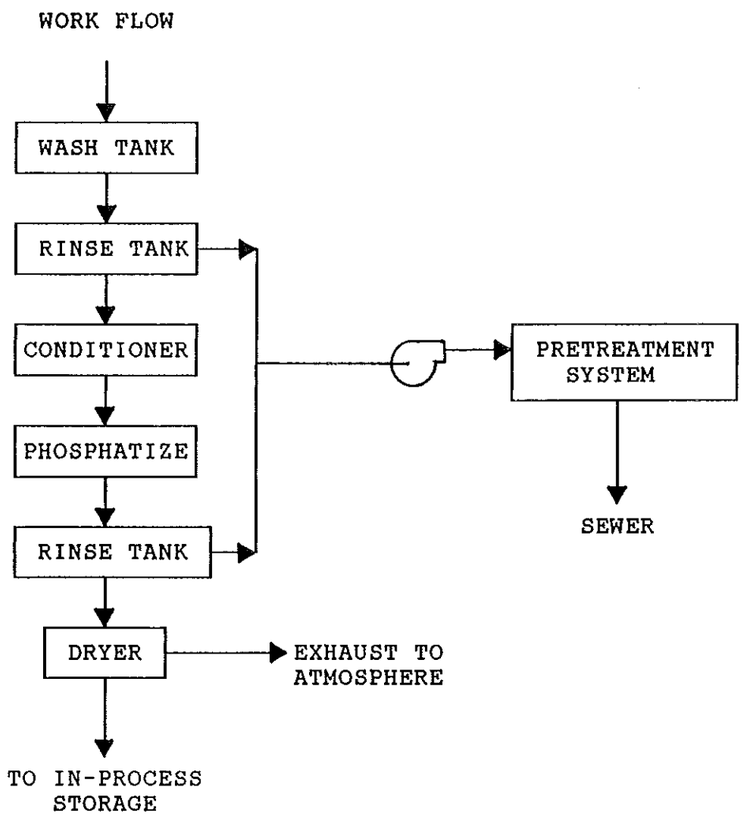


Figure 3.2 - **ALKALINE WASH PROCESS SCHEMATIC**

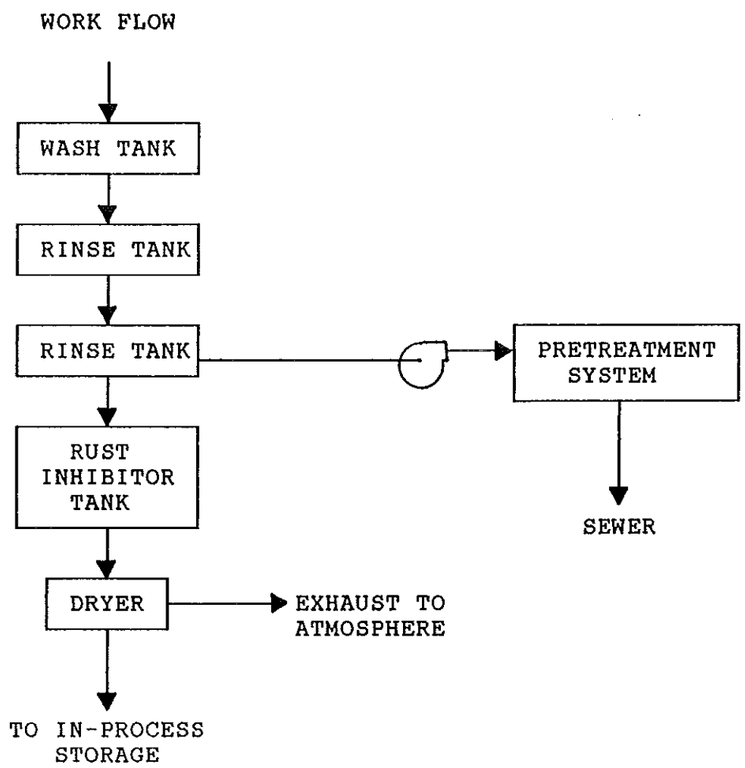


Figure 3.3 - ELECTROCOAT PAINT SYSTEM PROCESS SCHEMATIC

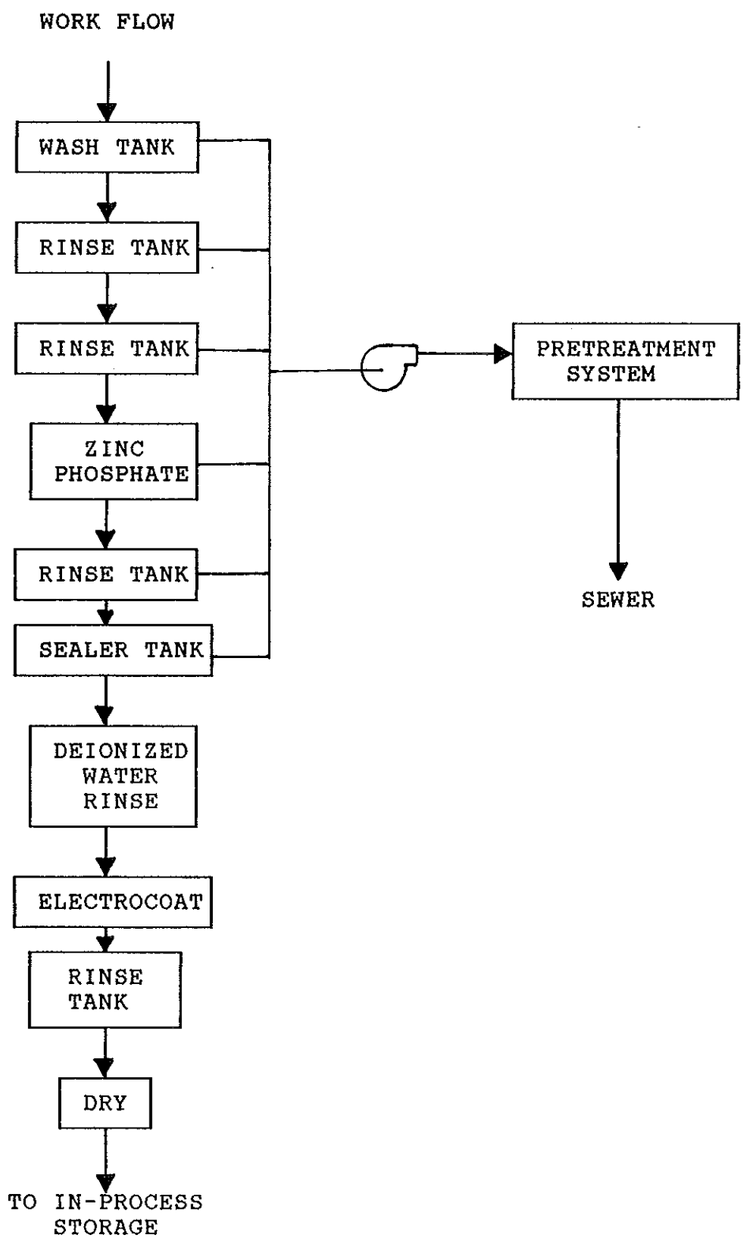


Figure 3.4 - METALS LABORATORY PROCESS SCHEMATIC

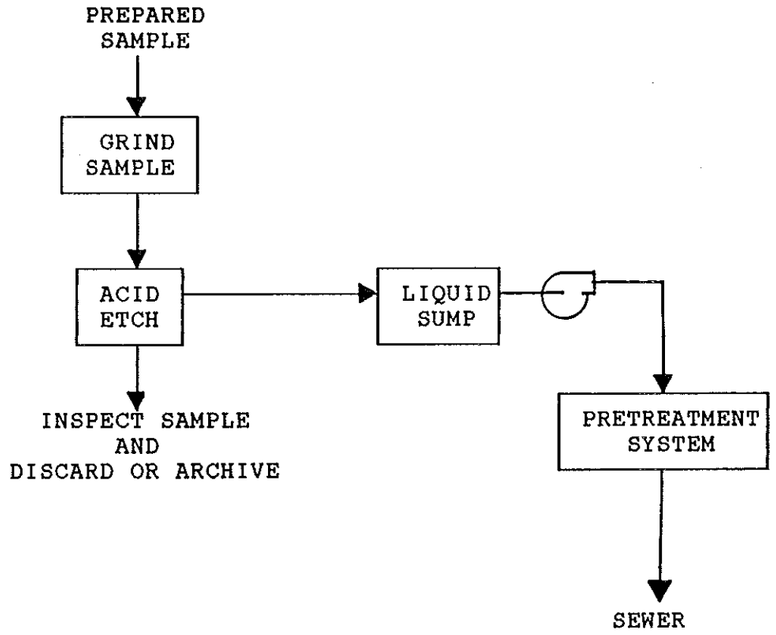


Figure 3.5 - CENTRAL MACHINING COOLANT PROCESS SCHEMATIC

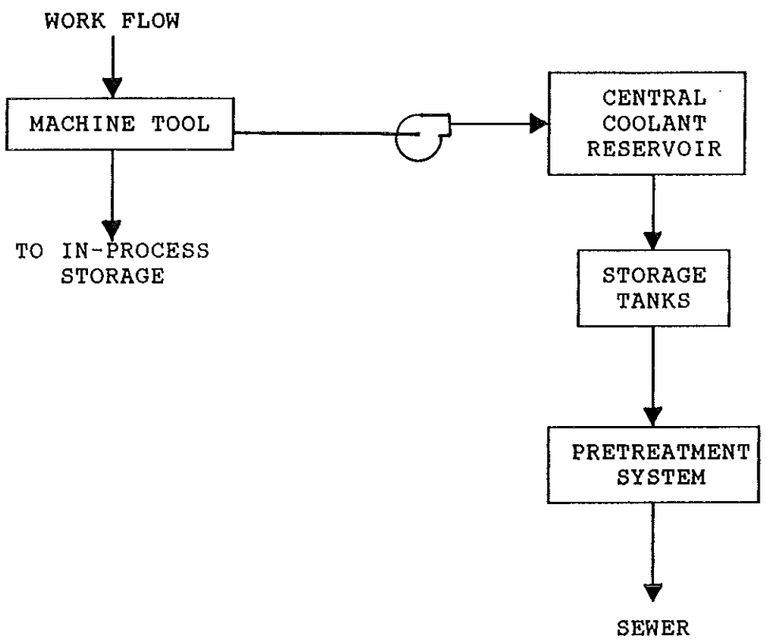
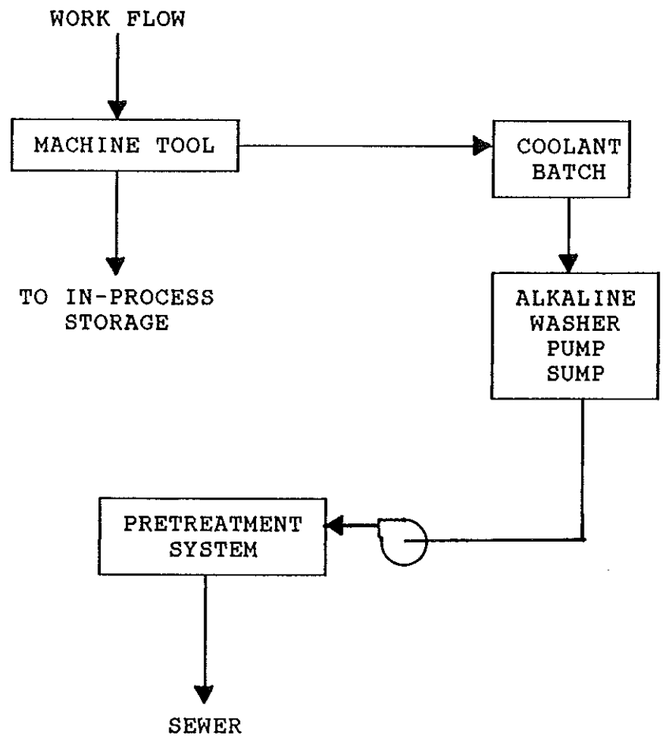
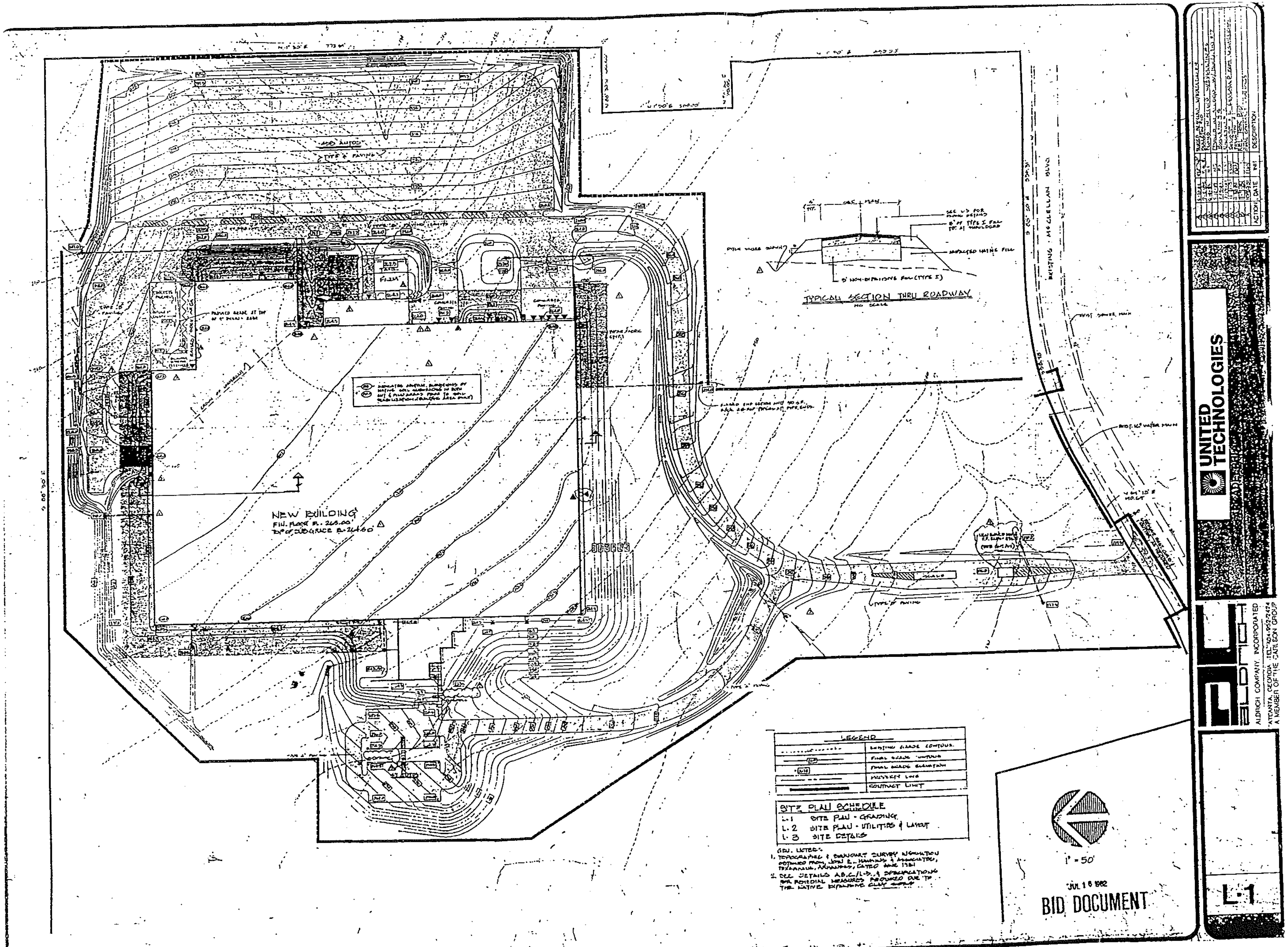


Figure 3.6 - SUMP MACHINING COOLANT PROCESS SCHEMATIC




NEW BUILDING
TYPICAL SECTION THRU ROADWAY
NO SCALE
LEGEND
EXISTING GRADE CONTOUR
FINAL GRADE CONTOUR
FINAL GRADE ELEVATION
PROPERTY LINE
CONTRACT LIMIT
SITE PLAN SCHEDULE
L-1 SITE PLAN - GRADING
L-2 SITE PLAN - UTILITIES & LAYOUT
L-3 SITE DETAILS
1" = 50'
JUL 1 6 1982
BID DOCUMENT
UNITED TECHNOLOGIES
ALDRICH COMPANY, INCORPORATED
ATLANTA, GEORGIA TEL. 404-952-2474
A MEMBER OF THE CARLSON GROUP
ACTION DATE INIT DESCRIPTION
L-1

CHEMISTS
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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: September 8, 1992
Date Received : August 27, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: EFFLUENT. (48 HOUR COMP.) TOTAL TOXIC ORGANICS = .108 MG/L

ANALYTE		RESULT	UNITS	METHOD
Dinitro-o-cresol,4,6-	<	50.000	ug/Liter	625
Dinitrophenol, 2,4-	<	1.000	ug/Liter	625
Nitrophenol, 2-	<	10.000	ug/Liter	625
rophenol, 4-	<	50.000	ug/Liter	625
hloro-m-cresol	<	10.000	ug/Liter	625
Pentachlorophenol	<	10.000	ug/Liter	625
Phenol		1.000	ug/Liter	625
Trichlorophenol, 2, 4, 6-	<	10.000	ug/Liter	625
Acenaphthene	<	1.000	ug/liter	625
Acenaphthylene	<	1.000	ug/Liter	625
Anthracene	<	1.000	ug/Liter	625
Benzidine	<	50.000	ug/Liter	625
Benzo (a) anthracene		0.970	ug/Liter	625
Benzo (a) pyrene	<	1.000	ug/Liter	625
Benzofluoranthene, 3,4-	<	1.000	ug/Liter	625
Benzo (g,h,i) perylene	<	1.000	ug/Liter	625
Benzo (k) fluoranthene	<	1.000	ug/Liter	625
is (2-chloroethoxy) methane	<	10.000	ug/Liter	625
Bis (2-chloroethyl) ether	<	10.000	ug/Liter	625
Bis (2-chloroisopropyl) ether	<	10.000	ug/Liter	625
is (2-ethylhexyl) phthalate		57.700	ug/Liter	625
romophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
Butylbenzyl phthalate		32.410	ug/Liter	625
hloronaphthalene, 2-	<	10.000	ug/Liter	625
hlorophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
Chrysene		1.000	ug/Liter	625
ibenzo (a,h) anthracene	<	1.000	ug/Liter	625
ichlorobenzene, 1,2-	<	0.200	ug/Liter	624
Dichlorobenzene, 1,3-	<	0.200	ug/Liter	624
hlorobenzene, 1,4-		0.200	ug/Liter	624
ichlorobenzidine, 3,3-	<	50.000	ug/Liter	625
iethylphthalate	<	10.000	ug/Liter	625
Dimethylphthalate	<	10.000	ug/Liter	624

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Date of Report: September 8, 1992
Date Received : August 27, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: EFFLUENT. (48 HOUR COMP.) TOTAL TOXIC ORGANICS = .108 MG/L

ANALYTE		RESULT	UNITS	METHOD
Di-n-butyl phthalate		1.170	ug/Liter	625
Dinitrotoluene, 2,4-	<	10.000	ug/Liter	625
Dinitrotoluene, 2,6-	<	10.000	ug/Liter	625
[illegible] n-octyl phthalate		3.700	ug/Liter	625
[illegible]phenylhydrazine, 1,2-	<	10.000	ug/Liter	625
Fluoranthene	<	1.000	ug/Liter	625
Fluorene	<	1.000	ug/Liter	625
Hexachlorobenzene	<	10.000	ug/Liter	625
Hexachlorobutadiene	<	10.000	ug/Liter	625
Hexachlorocyclopentadiene	<	10.000	ug/Liter	625
Hexachloroethane	<	10.000	ug/Liter	625
Indeno (1,2,3-Cd) pyrene	<	1.000	ug/Liter	625
Isophorone	<	10.000	ug/Liter	625
Naphthalene	<	1.000	ug/Liter	625
Nitrobenzene	<	10.000	ug/Liter	625
N-nitrosodimethylamine	<	10.000	ug/Liter	625
N-nitrosodi-n-propylamine	<	10.000	ug/Liter	625
N-nitrosodiphenylamine	<	10.000	ug/Liter	625
Phenanthrene	<	1.000	ug/Liter	625
Pyrene	<	1.000	ug/Liter	625
Trichlorobenzene, 1, 2, 4-	<	10.000	ug/Liter	625
Aldrin	<	10.000	ug/Liter	625
BHC, Alpha	<	10.000	ug/Liter	625
BHC, Beta	<	10.000	ug/Liter	625
BHC, Gamma	<	10.000	ug/Liter	625
Chlordane	<	10.000	ug/Liter	625
[illegible], 4'-DDT	<	10.000	ug/Liter	625
[illegible], 4'-DDE	<	10.000	ug/Liter	625
Dieldrin	<	10.000	ug/Liter	625
[illegible]osulfan, Alpha-	<	10.000	ug/Liter	625
[illegible]ndosulfan, Beta-	<	10.000	ug/Liter	625
[illegible]ndosulfan sulfate	<	10.000	ug/Liter	625
Endrin	<	10.000	ug/Liter	625

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ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: EFFLUENT. (48 HOUR COMP.) TOTAL TOXIC ORGANICS = .108 MG/L

ANALYTE		RESULT	UNITS	METHOD
Endrin aldehyde	<	10.000	ug/Liter	625
Heptachlor	<	10.000	ug/Liter	625
Heptachlor epoxide	<	10.000	ug/Liter	625
PCB-1016	<	10.000	ug/Liter	625
PCB-1221	<	10.000	ug/Liter	625
PCB-1232	<	10.000	ug/Liter	625
PCB-1242	<	10.000	ug/Liter	625
PCB-1248	<	10.000	ug/Liter	625
PCB-1254	<	10.000	ug/Liter	625
PCB-1260	<	10.000	ug/Liter	625
Toxaphene	<	10.000	ug/Liter	625
Cadmium		1.200	ug/Liter	213.2
Chromium	<	1.000	ug/Liter	218.2
Copper		126.000	ug/Liter	220.2
Cyanide	<	0.004	mg/Liter	4500 E
Lead		1.400	ug/Liter	239.2
Nickel		1404.000	ug/Liter	249.2
Ammonia nitrogen		4.960	mg/Liter	4500 F
Oil and grease		15.500	mg/Liter	5520 B
Phenols		0.023	ug/Liter	5530 D
pH		7.380	units	4500 B
Silver	<	0.200	ug/Liter	272.2
Total suspended solids		14.000	mg/Liter	2540 D
Zinc		330.000	ug/Liter	289.1

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Date of Report: September 8, 1992
Date Received : August 27, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS.
Sample From: EFFLUENT. (48 HOUR COMP.) TOTAL TOXIC ORGANICS = .108 MG/L

ANALYTE	RESULT	UNITS	METHOD

Collected by:
CARL SORRELLS on 08/27/92 at 11:40
Analysis by :
K. E. Sorrells, M.S./Cecil A. Sorrells/K. E. Sorrells II/Ben W. Glover

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C.& E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained.
See Attached.

Copies to:
MIKE DUMAS
FACILITIES ENGINEER
ONE SCROLL DRIVE
CARRIER CORPORATION
ARKADELPHIA, AR 71923-

Laboratory Number: K627.001 DKS Reviewed By: K. E. Sorrells, M.S. [ ]

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

QUALITY ASSURANCE

August 27, 1992
The following QA represents SRA's Quality Assurance values for this report.
Any analysis performed but not needed by your facility should be disregarded.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	# IN BAT.
SEMI-VOLATILES (Q.A.)	KES	09/01/92	1305	09/02/92	45	0.12	102.7	5
VOLATILES (Q.A.)	KES	09/01/92	1400	09/02/92	1235	1.55	106.7	11
CYANIDE	BWG	09/03/92	1650	/ /	0	0.00	140.0	2
PHENOLS	CAS	09/09/92	1100	/ /	0	0.00	0.0	2
CADMIUM	KESII	09/01/92	1033	09/01/92	1104	2.60	0.0	7
CHROMIUM	KESII	09/01/92	1417	09/01/92	1437	0.00	0.0	4
COPPER	KESII	09/03/92	1018	09/03/92	1053	6.30	0.0	7
LEAD	KESII	08/31/92	1551	08/31/92	1637	0.30	0.0	9
NICKEL	KESII	09/09/92	1115	09/09/92	1125	0.80	0.0	1
AMMONIA NITROGEN	KEH	09/08/92	1030	09/09/92	1030	0.00	0.0	14
OIL AND GREASE	KEH	09/01/92	1030	/ /	0	0.00	0.0	3
SILVER	KESII	09/02/92	1338	09/02/92	1356	6.50	99.9	4
TOTAL SUSPENDED SOLIDS	JBS	08/28/92	100	08/29/92	1330	3.10	95.3	26
ZINC	KESII	09/03/92	1615	09/03/92	1540	0.00	0.0	5

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up
Sample preservation and laboratory analysis conducted according to EPA
40 CFR Part 136 TEST/ANALYST/TIME/COEF. VAR.* QA PLAN filed with
ADPC*E. Include replication.

KES = K. E. Sorrells
JBS = James B. Sorrells
CAS = Cecil A. Sorrells
KES = Karl E. Sorrells

KESII = K. E. Sorrells
KEH = Kevin E. Hall
BWG = Ben W. Glover
CKS = Chandra K. Sorrells

9-16

CHAIN OF CUSTODY RECORD

LAB# K645.001,002,003

NAME OF COMPANY, CITY, OR PROJECT: United Technologies Carrier Arkadelphia

SAMPLER(S) (signature): Karl / Mike Duran

	SAMPLE COLLECTION LOCATION	DATE	TIME	COMP	GRAB	NO. OF CONTAINERS	ANALYSIS REQUIRED
1	discharge	9-2	11:40	X		1 1/2	RUSH ASAP
				X		1 metals	
				X		1 TTO	1 set vials
					X	1 O&G	and
				X		1 cyanide	
2	X Filter Media Cinn. Mill	9-2	10:30			TCLP	
3	T. Filter Media Brown & Sharpe	9-2	10:30			TCLP	

RELINQUISHED BY: (signature) Mike Duran

RECEIVED BY: (signature) Karl Sorrells 9-2-92 DATE/TIME 11:42

DISPATCHED BY: (signature)

RECEIVED FOR LABORATORY BY: DATE/TIME

Method of Shipment (CIRCLE ONE): UPS BUS WALK-IN SRA COURIER OTHER COURIER

NOTES: STANDARD METHODS PRESERVATION per EPA 40 CFR part 136 PH = 7.38

SHOW PRESERVATION: e.g. C 4 = cool to 4 C. Temp = 19.5°

S(2 = Sulfuric Acid to pH < 2. Flow =

N(2 = Nitric Acid to pH < 2.

(T) = Thiosulfate for dechlorination Cl2 =

SHOW EACH TYPE CONTAINER ON SEPARATE LINE. D.O. =

001 - 9-10

Rec'd 9-2

SORRELLS RESEARCH ASSOCIATES, INC.
(501) 562-9139

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: September 11, 1992
Date Received : September 2, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS
Sample From: DISCHARGE. TOTAL TOXIC ORGANICS = .032 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Acrolein	<	1.000	ug/Liter	624
Acrylonitrile	<	1.000	ug/Liter	624
Benzene		0.100	ug/Liter	624
Bromoform	<	0.200	ug/Liter	624
Carbon tetrachloride	<	0.200	ug/Liter	624
Chlorobenzene	<	0.200	ug/Liter	624
Chlorodibromomethane	<	0.200	ug/Liter	624
Chloroethane	<	0.200	ug/Liter	624
Chloroethylvinyl ether, 2-	<	0.200	ug/Liter	624
Chloroform		7.750	ug/Liter	624
Dichlorobromomethane		1.550	ug/Liter	624
Dichloroethane, 1,1-	<	0.200	ug/Liter	624
Dichloroethane, 1,2-	<	0.200	ug/Liter	624
Dichloroethylene, 1,1-	<	0.200	ug/Liter	624
Dichloropropane, 1,2-	<	0.200	ug/Liter	624
Dichloropropylene, cis-1,3-	<	0.200	ug/Liter	624
Dichloropropylene, trans-1,3-	<	0.200	ug/Liter	624
Ethylbenzene	<	0.200	ug/Liter	624
Methyl bromide	<	0.200	ug/Liter	624
Methyl chloride	<	0.200	ug/Liter	624
Methylene chloride		4.700	ug/Liter	624
Tetrachloroethane, 1, 1, 2, 2	<	0.200	ug/Liter	624
Tetrachloroethylene	<	0.200	ug/Liter	624
Toluene		3.700	ug/Liter	624
Dichloroethylene, cis-1,2-	<	0.200	ug/Liter	624
Dichloroethylene, trans-1,2-	<	0.200	ug/Liter	624
Trichloroethane, 1, 1, 1-		0.800	ug/Liter	624
Trichloroethane, 1, 1, 2-	<	0.200	ug/Liter	624
Trichloroethylene	<	0.200	ug/Liter	624
Vinyl chloride	<	0.200	ug/Liter	624
Chlorophenol, 2-	<	10.000	ug/Liter	625
Dichlorophenol, 2,4-	<	10.000	ug/Liter	625
Dimethylphenol, 2,4-	<	10.000	ug/Liter	625

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ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS
Sample From: DISCHARGE. TOTAL TOXIC ORGANICS = .032 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Dinitro-o-cresol,4,6-	<	50.000	ug/Liter	625
Dinitrophenol, 2,4-	<	1.000	ug/Liter	625
Nitrophenol, 2-	<	10.000	ug/Liter	625
Nitrophenol, 4-	<	50.000	ug/Liter	625
)-chloro-m-cresol	<	10.000	ug/Liter	625
Pentachlorophenol	<	10.000	ug/Liter	625
Phenol	<	10.000	mg/Liter	625
Trichlorophenol, 2, 4, 6-	<	10.000	ug/Liter	625
Acenaphthene	<	1.000	ug/liter	625
Acenaphthylene	<	1.000	ug/Liter	625
Anthracene	<	1.000	ug/Liter	625
Benzidine	<	50.000	ug/Liter	625
Benzo (a) anthracene	<	1.000	ug/Liter	625
Benzo (a) pyrene	<	1.000	ug/Liter	625
Benzofluoranthene, 3,4-	<	1.000	ug/Liter	625
Benzo (g,h,i) perylene	<	1.000	ug/Liter	625
Benzo (k) fluoranthene	<	1.000	ug/Liter	625
Bis (2-chloroethoxy) methane	<	10.000	ug/Liter	625
Bis (2-chloroethyl) ether	<	10.000	ug/Liter	625
Bis (2-chloroisopropyl) ether	<	10.000	ug/Liter	625
Bis (2-ethylhexyl) phthalate		32.155	ug/Liter	625
Bromophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
Butylbenzyl phthalate	<	10.000	ug/Liter	625
Chloronaphthalene, 2-	<	10.000	ug/Liter	625
Chlorophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
Chrysene	<	1.000	ug/Liter	625
Dibenzo (a,h) anthracene	<	1.000	ug/Liter	625
Dichlorobenzene, 1,2-	<	0.200	ug/Liter	624
Dichlorobenzene, 1,3-	<	0.200	ug/Liter	624
Dichlorobenzene, 1,4-	<	0.200	ug/Liter	624
Dichlorobenzidine, 3,3-	<	50.000	ug/Liter	625
Diethylphthalate	<	10.000	ug/Liter	625
Dimethylphthalate	<	10.000	ug/Liter	625

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Date Received : September 2, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS
Sample From: DISCHARGE. TOTAL TOXIC ORGANICS = .032 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Di-n-butyl phthalate		1.394	ug/Liter	625
Dinitrotoluene, 2,4-	<	10.000	ug/Liter	625
Dinitrotoluene, 2,6-	<	10.000	ug/Liter	625
Di-n-octyl phthalate		6.034	ug/Liter	625
`iphenylhydrazine, 1,2-	<	10.000	ug/Liter	625
.luoranthene	<	1.000	ug/Liter	625
Fluorene	<	1.000	ug/Liter	625
Hexachlorobenzene	<	10.000	ug/Liter	625
Hexachlorobutadiene	<	10.000	ug/Liter	625
Hexachlorocyclopentadiene	<	10.000	ug/Liter	625
Hexachloroethane	<	10.000	ug/Liter	625
Indeno (1,2,3-Cd) pyrene	<	1.000	ug/Liter	625
Isophorone	<	10.000	ug/Liter	625
Naphthalene	<	1.000	ug/Liter	625
Nitrobenzene	<	10.000	ug/Liter	625
N-nitrosodimethylamine	<	10.000	ug/Liter	625
N-nitrosodi-n-propylamine	<	10.000	ug/Liter	625
N-nitrosodiphenylamine	<	10.000	ug/Liter	625
Phenanthrene	<	1.000	ug/Liter	625
Pyrene	<	1.000	ug/Liter	625
Trichlorobenzene, 1, 2, 4-	<	10.000	ug/Liter	625
Aldrin	<	10.000	ug/Liter	625
BHC, Alpha	<	10.000	ug/Liter	625
BHC, Beta	<	10.000	ug/Liter	625
BHC, Gamma	<	10.000	ug/Liter	625
Chlordane	<	10.000	ug/Liter	625
4, 4'-DDT	<	10.000	ug/Liter	625
4, 4'-DDE	<	10.000	ug/Liter	625
Dieldrin	<	10.000	ug/Liter	625
Endosulfan, Alpha-	<	10.000	ug/Liter	625
Endosulfan, Beta-	<	10.000	ug/Liter	625
`ndosulfan sulfate	<	10.000	ug/Liter	625
Endrin				

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Job: WASTEWATER ANALYSIS
Sample From: DISCHARGE. TOTAL TOXIC ORGANICS = .032 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Endrin aldehyde	<	10.000	ug/Liter	625
Heptachlor	<	10.000	ug/Liter	625
Heptachlor epoxide	<	10.000	ug/Liter	625
PCB-1016	<	10.000	ug/Liter	625
PCB-1221	<	10.000	ug/Liter	625
PCB-1232	<	10.000	ug/Liter	625
PCB-1242	<	10.000	ug/Liter	625
PCB-1248	<	10.000	ug/Liter	625
PCB-1254	<	10.000	ug/Liter	625
PCB-1260	<	10.000	ug/Liter	625
Toxaphene	<	10.000	ug/Liter	625
Cadmium		1.800	ug/Liter	213.2
Chromium		8.000	ug/Liter	218.2
Copper		17.000	ug/Liter	220.2
Lead		25.700	ug/Liter	239.2
Nickel		81.000	ug/Liter	249.2
Silver	<	0.200	ug/Liter	272.2
Zinc		103.000	ug/Liter	289.2
Oil and grease		6.500	mg/Liter	5520 B
Total suspended solids		7.200	mg/Liter	2540 D
Cyanide	<	0.004	mg/Liter	4500 E
pH		7.380	units	4500 B
Phenols		0.015	mg/Liter	5530 D
Ammonia nitrogen		3.340	mg/Liter	4500 F

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LABORATORY AND FIELD SERVICES

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: September 11, 1992
Date Received : September 2, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: WASTEWATER ANALYSIS
Sample From: DISCHARGE. TOTAL TOXIC ORGANICS = .032 MG/LITER

ANALYTE	RESULT	UNITS	METHOD

Collected by:
KARL/MIKE DUMAS on 09/02/92 at 11:40
Analysis by :
K. Sorrells/J. Sorrells/C. Sorrells/K. Sorrells/K. Sorrells/K. Hall/B. Glover

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C.& E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained.
See Attached.

Copies to:
MIKE DUMAS
FACILITIES ENGINEER
ONE SCROLL DRIVE
CARRIER CORPORATION
ARKADELPHIA, AR 71923-

Laboratory Number: K645.001 DKS Reviewed By: K. E. Sorrells, M.S.

CHAIN OF CUSTODY RECORD

LAB# L046.001

4/10/17

NAME OF COMPANY, CITY, OR PROJECT: United Tech. - Carr Corp.

SAMPLER: (signature) Harry Short

SAMPLE COLLECTION LOCATION	DATE	TIME	COMP	GRAB	NO. OF CONTAINERS	ANALYSIS REQUIRED
246. Eff. 111792 5	11/16/17	0800 0900	X		1	Table III metals
					1	O+G
					1	TOC
					1	COD

This is a split sample City of Philadelphia completed to split with SRA / Environmental Services.

RELINQUISHED BY: (signature) X Harry Short

RECEIVED BY: (signature) Debra Sorrells — DATE/TIME 11-17-92 1058

DISPATCHED BY: (signature)

RECEIVED FOR LABORATORY BY: Ronni Dawes — DATE/TIME 11-17-92 1100

Method of Shipment (CIRCLE ONE): UPS BUS (HAND-IN) SRA COURIER OTHER COURIER

NOTES: STANDARD METHODS PRESERVATION per EPA 40 CFR part 136

SHOW PRESERVATION: e.g.: C 4 = cool to 4.C.
SC2 = Sulfuric Acid to pH < 2.
NC2 = Nitric Acid to pH < 2.
TH = Thiosulfate for dechlorination
SHOW EACH TYPE CONTAINER ON SEPARATE LINE.

PH -
Temp -
Flow -
CL2 -
D.O. -

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(301) 542-8139

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D

Jim Rumberg 246-0783

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 9, 1992
Date Received : November 17, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT 24 HR. COMP. SPLIT SAMPLE WITH CITY OF ARKADELPHIA.

ANALYTE		RESULT	UNITS	METHOD
Oil and grease		28.600	mg/Liter	5520 B
Total organic carbon		35.460	mg/Liter	5310 C
Chemical oxygen demand		352.000	mg/Liter	5220 B
Antimony	<	3.000	ug/Liter	204.2
Arsenic	<	1.000	ug/Liter	7060
Beryllium	<	0.200	ug/Liter	7091
Cadmium		3.290	ug/Liter	213.2
Chromium		45.000	ug/Liter	218.1
Copper		192.000	ug/Liter	220.2
Lead		59.600	ug/Liter	239.2
Mercury	<	0.200	ug/Liter	245.1
Nickel		146.000	ug/Liter	249.2
Selenium		2.700	ug/Liter	7741
Silver	<	0.200	ug/Liter	272.2
Thallium	<	1.000	ug/Liter	279.2
Zinc		470.000	ug/Liter	289.1

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 9, 1992
Date Received : November 17, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT 24 HR. COMP. SPLIT SAMPLE WITH CITY OF ARKADELPHIA.

ANALYTE	RESULT	UNITS	METHOD

Collected by:
IR. HARRY SHORT
nalysis by :
James B. Sorrells/Cecil A. Sorrells/Kevin E. Hall/K. E. Sorrells II

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C.& E. Includes 10 % replication and 10 % recovery studies by random selection. alibration records maintained.
ee Attached.

Copies to:

MIKE DUMAS
FACILITIES ENGINEER
ARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-

HARRY SHORT
PRETREATMENT COORDINATOR
ARKADELPHIA WTP
610 CADDO STREET
ARKADELPHIA, AR 71923-

aboratory Number: L046.001

LSM Reviewed By: K. E. Sorrells, M.S. [ ]

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

QUALITY ASSURANCE

November 17, 1992
The following QA represents SRA's Quality Assurance values for this report.
Any analysis performed but not needed by your facility should be disregarded.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	# IN BAT.
OIL AND GREASE	KEH	11/20/92	1300	11/24/92	930	6.00	0.0	15
TOTAL ORGANIC CARBON	BWG	11/19/92	1520	11/20/92	1020	4.80	123.0	1
CHEMICAL OXYGEN DEMAND	KEH	11/30/92	730	11/30/92	1130	0.81	93.0	3
ANTIMONY	KESII	12/07/92	1554	12/07/92	1640	2.40	106.4	13
ARSENIC	KESII	11/20/92	1100	11/20/92	1230	2.00	103.0	8
BERYLLIUM	KESII	12/07/92	1430	12/07/92	1446	7.00	110.7	12
CADMIUM	KESII	12/04/92	2055	12/04/92	2121	2.70	102.0	6
CHROMIUM	KESII	12/07/92	155	12/07/92	415	9.10	110.6	12
COPPER	KESII	11/24/92	1115	11/24/92	1200	2.30	116.7	8
LEAD	KESII	12/02/92	1125	12/02/92	1225	0.20	102.0	6
MERCURY	KESII	12/04/92	1125	12/04/92	1205	3.80	92.5	9
NICKEL	KESII	11/23/92	1836	11/23/92	1849	1.40	108.5	4
SELENIUM	KESII	11/19/92	1900	11/20/92	1758	5.07	126.0	22
SILVER	KESII	12/07/92	1331	12/07/92	1345	0.00	110.3	11
THALLIUM	KESII	12/07/92	1554	12/07/92	1632	0.00	99.1	12
ZINC	KESII	11/24/92	2102	11/24/92	2115	1.80	98.7	12

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up
Sample preservation and laboratory analysis conducted according to EPA
40 CFR Part 136 TEST/ANALYST/TIME/COEF. VAR.* QA PLAN filed with
ADPC*E. Include replication.

KES = K. E. Sorrells
JBS = James B. Sorrells
CAS = Cecil A. Sorrells
KES = Karl E. Sorrells

KESII = K. E. Sorrells
KEH = Kevin E. Hall
BWG = Ben W. Glover
CKS = Chandra K. Sorrells

CHAIN OF CUSTODY RECORD

LAB# L058-001A,001B 41017

NAME OF COMPANY, CITY, OR PROJECT: ~~Harry~~ CARRIER					SAMPLER: (signature)	
SAMPLE COLLECTION LOCATION	DATE	TIME	COMP	GRAB	NO. OF CONTAINERS	ANALYSIS REQUIRED
AREA CARRIER	11-18	07:00		Y	6	TPH
						CD, CN, OIL & GR, CU, NI
						ZN, TSS, PH, Ag, PB

RELINQUISHED BY: (signature) — RECEIVED BY: (signature) — DATE/TIME

Mike Dunn — [signature] — 11-18-92 07:00

DISPATCHED BY: (signature) — RECEIVED FOR LABORATORY BY: — DATE/TIME

Karl Sredl — 11-18-92 6:30

Method of Shipment (CIRCLE ONE): UPS BUS HAND-IN (SRA COURIER) OTHER COURIER

NOTES: STANDARD METHODS PRESERVATION per EPA 40 CFR part 136

SHOW PRESERVATION; e.g.: C 4 = cool to 4.C.
SC2 = Sulfuric Acid to pH < 2.
NC2 = Nitric Acid to pH < 2.
(T) = Thiosulfate for dechlorination
SHOW EACH TYPE CONTAINER ON SEPARATE LINE.

PH - 7.42
Temp - 14.5
Flow - Auto Sample
CL2 -
D.O. - 8.1

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 1, 1992
Date Received : November 18, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT TO CITY SEWER TTO = 0.175 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Acrolein	<	1.000	ug/Liter	624
Acrylonitrile	<	1.000	ug/Liter	624
Benzene	<	0.200	ug/Liter	624
Bromoform	<	0.200	ug/Liter	624
Carbon tetrachloride	<	0.200	ug/Liter	624
Chlorobenzene	<	0.200	ug/Liter	624
Chlorodibromomethane		0.500	ug/Liter	624
Chloroethane	<	1.000	ug/Liter	624
Chloroethylvinyl ether, 2-	<	1.000	ug/Liter	624
Chloroform		15.200	ug/Liter	624
Dichlorobromomethane		3.300	ug/Liter	624
Dichloroethane, 1,1-	<	0.200	ug/Liter	624
Dichloroethane, 1,2-	<	0.200	ug/Liter	624
Dichloroethylene, 1,1-	<	0.200	ug/Liter	624
Dichloropropane, 1,2-	<	0.200	ug/Liter	624
Dichloropropylene, cis-1,3-	<	0.200	ug/Liter	624
Dichloropropylene, trans-1,3-	<	0.200	ug/Liter	624
Ethylbenzene		0.500	ug/Liter	624
Methyl bromide	<	1.000	ug/Liter	624
Methyl chloride	<	1.000	ug/Liter	624
Methylene chloride		0.400	ug/Liter	624
Tetrachloroethane, 1, 1, 2, 2	<	0.200	ug/Liter	624
Tetrachloroethylene	<	0.200	ug/Liter	624
Toluene		4.200	ug/Liter	624
Dichloroethylene, cis-1,2-	<	0.200	ug/Liter	624
Dichloroethylene, trans-1,2-	<	0.200	ug/Liter	624
Trichloroethane, 1, 1, 1-	<	0.200	ug/Liter	624
Trichloroethane, 1, 1, 2-	<	0.200	ug/Liter	624
Trichloroethylene	<	0.200	ug/Liter	624
Vinyl chloride	<	1.000	ug/Liter	624
Chlorophenol, 2-	<	10.000	ug/Liter	625
Dichlorophenol, 2,4-	<	10.000	ug/Liter	625
Dimethylphenol, 2,4-	<	10.000	ug/Liter	625

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 1, 1992
Date Received : November 18, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT TO CITY SEWER TTO = 0.175 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
)initro-o-cresol,4,6-	<	10.000	ug/Liter	625
Dinitrophenol, 2,4-	<	10.000	ug/Liter	625
Nitrophenol, 2-	<	10.000	ug/Liter	625
itrophenol, 4-	<	10.000	ug/Liter	625
hloro-m-cresol	<	10.000	ug/Liter	625
Pentachlorophenol	<	10.000	ug/Liter	625
henol		14.400	ug/Liter	625
richlorophenol, 2, 4, 6-	<	10.000	ug/Liter	625
Acenaphthene	<	1.000	ug/liter	625
cenaphthylene	<	1.000	ug/Liter	625
nthracene	<	1.000	ug/Liter	625
Benzidine	<	10.000	ug/Liter	625
enzo (a) anthracene	<	1.000	ug/Liter	625
enzo (a) pyrene	<	1.000	ug/Liter	625
Benzofluoranthene, 3,4-	<	1.000	ug/Liter	625
Benzo (g,h,i) perylene	<	10.000	ug/Liter	625
enzo (k) fluoranthene	<	1.000	ug/Liter	625
is (2-chloroethoxy) methane	<	10.000	ug/Liter	625
Bis (2-chloroethyl) ether	<	10.000	ug/Liter	625
is (2-chloroisopropyl) ether	<	10.000	ug/Liter	625
is (2-ethylhexyl) phthalate		132.800	ug/Liter	625
Bromophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
utylbenzyl phthalate	<	10.000	ug/Liter	625
hloronaphthalene, 2-	<	10.000	ug/Liter	625
hlorophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
Chrysene	<	1.000	ug/Liter	625
ibenzo (a,h) anthracene	<	10.000	ug/Liter	625
ichlorobenzene, 1,2-	<	0.200	ug/Liter	624
Dichlorobenzene, 1,3-	<	0.200	ug/Liter	624
hlorobenzene, 1,4-	<	0.200	ug/Liter	624
ichlorobenzidine, 3,3-	<	10.000	ug/Liter	625
Diethylphthalate	<	10.000	ug/Liter	625
imethylphthalate	<	10.000	ug/Liter	625

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 1, 1992
Date Received : November 18, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT TO CITY SEWER TTO = 0.175 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Di-n-butyl phthalate		12.210	ug/Liter	625
Dinitrotoluene, 2,4-	<	10.000	ug/Liter	625
Dinitrotoluene, 2,6-	<	10.000	ug/Liter	625
Di-n-octyl phthalate	<	10.000	ug/Liter	625
Diphenylhydrazine, 1,2-	<	10.000	ug/Liter	625
Fluoranthene	<	1.000	ug/Liter	625
Fluorene	<	1.000	ug/Liter	625
Hexachlorobenzene	<	10.000	ug/Liter	625
Hexachlorobutadiene	<	10.000	ug/Liter	625
Hexachlorocyclopentadiene	<	10.000	ug/Liter	625
Hexachloroethane	<	10.000	ug/Liter	625
Indeno (1,2,3-Cd) pyrene	<	10.000	ug/Liter	625
Isophorone	<	10.000	ug/Liter	625
Naphthalene		1.593	ug/Liter	625
Nitrobenzene	<	10.000	ug/Liter	625
N-nitrosodimethylamine	<	10.000	ug/Liter	625
N-nitrosodi-n-propylamine	<	10.000	ug/Liter	625
N-nitrosodiphenylamine	<	10.000	ug/Liter	625
Phenanthrene	<	1.000	ug/Liter	625
Pyrene	<	1.000	ug/Liter	625
Trichlorobenzene, 1, 2, 4-	<	10.000	ug/Liter	625
Aldrin	<	10.000	ug/Liter	625
BHC, Alpha	<	10.000	ug/Liter	625
BHC, Beta	<	10.000	ug/Liter	625
BHC, Gamma	<	10.000	ug/Liter	625
Chlordane	<	10.000	ug/Liter	625
4, 4'-DDT	<	10.000	ug/Liter	625
4, 4'-DDE	<	10.000	ug/Liter	625
Dieldrin	<	10.000	ug/Liter	625
Endosulfan, Alpha-	<	10.000	ug/Liter	625
Endosulfan, Beta-	<	10.000	ug/Liter	625
Endosulfan sulfate	<	10.000	ug/Liter	625
Endrin	<	10.000	ug/Liter	625

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 1, 1992
Date Received : November 18, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT TO CITY SEWER TTO = 0.175 MG/LITER

ANALYTE		RESULT	UNITS	METHOD
Endrin aldehyde	<	10.000	ug/Liter	625
Heptachlor	<	10.000	ug/Liter	625
Heptachlor epoxide	<	10.000	ug/Liter	625
PCB-1016	<	10.000	ug/Liter	625
PCB-1221	<	10.000	ug/Liter	625
PCB-1232	<	10.000	ug/Liter	625
PCB-1242	<	10.000	ug/Liter	625
PCB-1248	<	10.000	ug/Liter	625
PCB-1254	<	10.000	ug/Liter	625
PCB-1260	<	10.000	ug/Liter	625
Toxaphene	<	10.000	ug/Liter	625

Collected by:
MIKE DUMAS on 11/18/92 at 14:00
Analysis by :
K. Sorrells/J. Sorrells/C. Sorrells/K. Sorrells/K. Sorrells/K. Hall/B. Glover

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C.& E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained.
See Attached.

Copies to:
MIKE DUMAS
FACILITIES ENGINEER
ONE SCROLL DRIVE
CARRIER CORPORATION
ARKADELPHIA, AR 71923-

Laboratory Number: L058.001A DKS Reviewed By: K. E. Sorrells, M.S. [ ]

SORRELLS RESEARCH
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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 14, 1992
Date Received : November 18, 1992

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER.
Sample From: EFFLUENT TO CITY SEWER.

ANALYTE		RESULT	UNITS	METHOD
Cyanide	<	0.002	mg/Liter	4500 E
Oil and grease		106.000	mg/Liter	5520 B
Total suspended solids		42.000	mg/Liter	2540 D
pH		3.420	units	4500 B
[illegible]mium		4.700	ug/Liter	213.2
Chromium		41.000	ug/Liter	218.2
Copper		2606.000	ug/Liter	220.2
Lead		3.200	ug/Liter	239.2
Nickel		389.000	ug/Liter	249.2
Silver		1.800	ug/Liter	272.2
Zinc		923.000	ug/Liter	289.1

Collected by:
MIKE DUMAS on 11/18/92 at 14:00
Analysis by :
James Sorrells/K.E Sorrells II/Kevin Hall/ Ben Glover

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C.& E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained.
See Attached.

Copies to:
MIKE DUMAS
FACILITIES ENGINEER
CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-

Laboratory Number: L058.001B DKS Reviewed By: K. E. Sorrells, M.S.

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LABORATORY AND FIELD SERVICES

WPCF

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

QUALITY ASSURANCE

November 18, 1992
The following QA represents SRA's Quality Assurance values for this report.
Any analysis performed but not needed by your facility should be disregarded.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	# IN BAT.
TOTAL SUSPENDED SOLIDS	JBS	11/23/92	800	11/23/92	1400	3.12	100.4	35
OIL AND GREASE	KEH	12/01/92	1310	12/03/92	1110	10.00	0.0	15
CADMIUM	KESII	12/04/92	2152	12/04/92	2237	3.50	102.0	9
CHROMIUM	KESII	12/07/92	1113	12/07/92	1228	0.00	110.6	8
COPPER	KESII	11/24/92	1115	11/24/92	1200	2.30	116.7	8
LEAD	KESII	12/07/92	2	12/06/92	103	9.20	93.4	10
NICKEL	KESII	12/11/92	1737	12/11/92	1931	3.80	97.3	11
SILVER	KESII	12/07/92	1331	12/07/92	1345	0.00	110.3	11
ZINC	KESII	11/24/92	2117	11/24/92	2130	0.80	98.7	10

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up
Sample preservation and laboratory analysis conducted according to EPA
40 CFR Part 136 TEST/ANALYST/TIME/COEF. VAR.* QA PLAN filed with
ADPC*E. Include replication.

KES = K. E. Sorrells
JBS = James B. Sorrells
CAS = Cecil A. Sorrells
KES = Karl E. Sorrells

KESII = K. E. Sorrells
KEH = Kevin E. Hall
BWG = Ben W. Glover
CKS = Chandra K. Sorrells

CHEMISTS
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LABORATORY AND FIELD SERVICES

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

QUALITY ASSURANCE

November 18, 1992
The following QA represents SRA's Quality Assurance values for this report.
Any analysis performed but not needed by your facility should be disregarded.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	# IN BAT.
/OLATILES (Q.A.)	KES	11/20/92	1211	11/20/92	1850	3.55	79.9	6
SEMI-VOLATILES (Q.A.)	KES	11/24/92	1639	11/24/92	2157	8.40	79.6	2

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up
Sample preservation and laboratory analysis conducted according to EPA
40 CFR Part 136 TEST/ANALYST/TIME/COEF. VAR.* QA PLAN filed with
ADPC*E. Include replication.

KES = K. E. Sorrells
JBS = James B. Sorrells
CAS = Cecil A. Sorrells
KES = Karl E. Sorrells

KESII = K. E. Sorrells
KEH = Kevin E. Hall
BWG = Ben W. Glover
CKS = Chandra K. Sorrells

CHAIN OF CUSTODY RECORD

LAB# 277.001 4/017.
277.002 TTO

NAME OF COMPANY, CITY, OR PROJECT: UTCC

SAMPLERS (signature): Ken / Mike Dumas

SAMPLE COLLECTION LOCATION	DATE	TIME	COMP	GRAB	NO. OF CONTAINERS	ANALYSIS REQUIRED
	1-12/1-13		X			Cd, Cu, ~~O&G~~, Cr, Cu, Ni, Zn
						TTO, TSS, pH, Ag, Pb
		1:45		X		O&G

RELINQUISHED BY: (signature) — RECEIVED BY: (signature) — DATE/T:
Mike Dumas — Ken Smith — 1-13-93 1:45

DISPATCHED BY: (signature) — RECEIVED FOR LABORATORY BY: — DATE/T:
James B. Smith 1-13-93 3:20

Method of Shipment (CIRCLE ONE): UPS BUS WALK-IN EPA COURIER OTHER COURIER

NOTES:
STANDARD METHODS PRESERVATION per EPA 40 CFR part 136
SHOW PRESERVATION; e.g.: C & cool to 4 C.
S\2 = Sulfuric Acid to pH < 2.
N\2 = Nitric Acid to pH < 2.
(T) = Thiosulfate for dechlorination
SHOW EACH TYPE CONTAINER ON SEPARATE LINE.

P.H. - 8.30
Temp - 12.2
Flow -
CL2 -
D.O. -

C
L
D

CORRELLS RESEARCH ASSOCIATES, INC.
(501) 562-8139

SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES

CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: January 27, 1993
Date Received : January 13, 1993

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT TO CITY SEWER. TTO = 0.040 MG/LITER.

ANALYTE		RESULT	UNITS	METHOD
Acrolein	<	1.000	ug/Liter	624
Acrylonitrile	<	1.000	ug/Liter	624
Benzene	<	0.200	ug/Liter	624
›moform	<	0.200	ug/Liter	624
..rbon tetrachloride	<	0.200	ug/Liter	624
Chlorobenzene	<	0.200	ug/Liter	624
Chlorodibromomethane	<	0.200	ug/Liter	624
Chloroethane	<	0.200	ug/Liter	624
Chloroethylvinyl ether, 2-	<	0.200	ug/Liter	624
Chloroform		24.800	ug/Liter	624
Bromodichloromethane	<	0.200	ug/Liter	624
Dichloroethane, 1,1-	<	0.200	ug/Liter	624
Dichloroethane, 1,2-	<	0.200	ug/Liter	624
Dichloroethylene, 1,1-	<	0.200	ug/Liter	624
Dichloropropane, 1,2-	<	0.200	ug/Liter	624
Dichloropropylene, cis-1,3-	<	0.200	ug/Liter	624
Dichloropropylene, trans-1,3-	<	0.200	ug/Liter	624
Ethylbenzene		0.600	ug/Liter	624
Methyl bromide	<	0.200	ug/Liter	624
Methyl chloride	<	0.200	ug/Liter	624
Methylene chloride	<	0.200	ug/Liter	624
Tetrachloroethane, 1, 1, 2, 2	<	0.200	ug/Liter	624
Tetrachloroethylene	<	0.200	ug/Liter	624
Toluene		2.000	ug/Liter	624
Dichloroethylene, cis-1,2-	<	0.200	ug/Liter	624
Dichloroethylene, trans-1,2-	<	0.200	ug/Liter	624
Trichloroethane, 1, 1, 1-	<	0.200	ug/Liter	624
Trichloroethane, 1, 1, 2-	<	0.200	ug/Liter	624
T..ichloroethylene	<	0.200	ug/Liter	624
.yl chloride	<	0.200	ug/Liter	624
Chlorophenol, 2-	<	10.000	ug/Liter	625
Dichlorophenol, 2,4-	<	10.000	ug/Liter	625
Dimethylphenol, 2,4-	<	10.000	ug/Liter	625

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8002 STANTON ROAD
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LABORATORY ANALYSIS

Date of Report: January 27, 1993
Date Received : January 13, 1993

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT TO CITY SEWER. TTO = 0.040 MG/LITER.

ANALYTE		RESULT	UNITS	METHOD
Dinitro-o-cresol,4,6-	<	10.000	ug/Liter	625
Dinitrophenol, 2,4-	<	10.000	ug/Liter	625
Nitrophenol, 2-	<	10.000	ug/Liter	625
Nitrophenol, 4-	<	10.000	ug/Liter	625
P-chloro-m-cresol	<	10.000	ug/Liter	625
Pentachlorophenol	<	10.000	ug/Liter	625
Phenol	<	10.000	mg/Liter	625
Trichlorophenol, 2, 4, 6-	<	10.000	ug/Liter	625
Acenaphthene	<	1.000	ug/Liter	625
Acenaphthylene	<	1.000	ug/Liter	625
Anthracene	<	1.000	ug/Liter	625
Benzidine	<	10.000	ug/Liter	625
Benzo (a) anthracene	<	1.000	ug/Liter	625
Benzo (a) pyrene	<	1.000	ug/Liter	625
Benzofluoranthene, 3,4-	<	1.000	ug/Liter	625
Benzo (g,h,i) perylene	<	1.000	ug/Liter	625
Benzo (k) fluoranthene	<	1.000	ug/Liter	625
Bis (2-chloroethoxy) methane	<	10.000	ug/Liter	625
Bis (2-chloroethyl) ether	<	10.000	ug/Liter	625
Bis (2-chloroisopropyl) ether	<	10.000	ug/Liter	625
Bis (2-ethylhexyl) phthalate		14.850	ug/Liter	625
Bromophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
Butylbenzyl phthalate	<	10.000	ug/Liter	625
Chloronaphthalene, 2-	<	10.000	ug/Liter	625
Chlorophenyl phenyl ether, 4-	<	10.000	ug/Liter	625
Chrysene	<	1.000	ug/Liter	625
Dibenzo (a,h) anthracene	<	1.000	ug/Liter	625
Dichlorobenzene, 1,2-	<	10.000	ug/Liter	625
Dichlorobenzene, 1,3-	<	10.000	ug/Liter	625
Dichlorobenzene, 1,4-	<	10.000	ug/Liter	625
Dichlorobenzidine, 3,3-	<	10.000	ug/Liter	625
Diethylphthalate	<	10.000	ug/Liter	625
Dimethylphthalate	<	10.000	ug/Liter	625

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LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: January 27, 1993
Date Received : January 13, 1993

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT TO CITY SEWER. TTO = 0.040 MG/LITER.

ANALYTE		RESULT	UNITS	METHOD
Di-n-butyl phthalate	<	10.000	ug/Liter	625
Dinitrotoluene, 2,4-	<	10.000	ug/Liter	625
Dinitrotoluene, 2,6-	<	10.000	ug/Liter	625
Di-n-octyl phthalate	<	10.000	ug/Liter	625
Diphenylhydrazine, 1,2-	<	10.000	ug/Liter	625
Fluoranthene	<	1.000	ug/Liter	625
Fluorene	<	1.000	ug/Liter	625
Hexachlorobenzene	<	10.000	ug/Liter	625
Hexachlorobutadiene	<	10.000	ug/Liter	625
Hexachlorocyclopentadiene	<	10.000	ug/Liter	625
Hexachloroethane	<	10.000	ug/Liter	625
Indeno (1,2,3-Cd) pyrene	<	1.000	ug/Liter	625
Isophorone	<	10.000	ug/Liter	625
Naphthalene		1.318	ug/Liter	625
Nitrobenzene	<	10.000	ug/Liter	625
N-nitrosodimethylamine	<	10.000	ug/Liter	625
N-nitrosodi-n-propylamine	<	10.000	ug/Liter	625
N-nitrosodiphenylamine	<	10.000	ug/Liter	625
Phenanthrene	<	1.000	ug/Liter	625
Pyrene	<	1.000	ug/Liter	625
Trichlorobenzene, 1, 2, 4-	<	10.000	ug/Liter	625
Aldrin	<	10.000	ug/Liter	625
BHC, Alpha	<	10.000	ug/Liter	625
BHC, Beta	<	10.000	ug/Liter	625
BHC, Gamma	<	10.000	ug/Liter	625
Chlordane	<	10.000	ug/Liter	625
4, 4'-DDT	<	10.000	ug/Liter	625
4, 4'-DDE	<	10.000	ug/Liter	625
Dieldrin	<	10.000	ug/Liter	625
Endosulfan, Alpha-	<	10.000	ug/Liter	625
Endosulfan, Beta-	<	10.000	ug/Liter	625
Endosulfan sulfate	<	10.000	ug/Liter	625
Endrin	<	10.000	ug/Liter	625

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6002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: January 27, 1993
Date Received : January 13, 1993

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER MONITORING.
Sample From: EFFLUENT TO CITY SEWER. TTO = 0.040 MG/LITER.

ANALYTE		RESULT	UNITS	METHOD
Endrin aldehyde	<	10.000	ug/Liter	625
Heptachlor	<	10.000	ug/Liter	625
Heptachlor epoxide	<	10.000	ug/Liter	625
PCB-1016	<	10.000	ug/Liter	625
PCB-1221	<	10.000	ug/Liter	625
PCB-1232	<	10.000	ug/Liter	625
PCB-1242	<	10.000	ug/Liter	625
PCB-1248	<	10.000	ug/Liter	625
PCB-1254	<	10.000	ug/Liter	625
PCB-1260	<	10.000	ug/Liter	625
Toxaphene	<	10.000	ug/Liter	625
BHC, Delta	<	10.000	ug/Liter	625
4, 4'-DDD	<	10.000	ug/Liter	625
2, 3, 7, 8- TCDD	<	10.000	ug/Liter	625

Collected by:
KARL SORRELLS/MIKE DUMAS on 01/12/93
Analysis by :
K. E. Sorrells, M. S./Kevin E. Hall

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C.& E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained.
See Attached.

Copies to:
MIKE DUMAS
FACILITIES ENGINEER
CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-

Laboratory Number: L277.001 LSM Reviewed By: K. E. Sorrells, M.S. [4 E

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QUALITY ASSURANCE

January 13, 1993
The following QA represents SRA's Quality Assurance values for this report.
Any analysis performed but not needed by your facility should be disregarded.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	# IN BAT.
SEMI-VOLATILES (Q.A.)	KES	01/26/93	1540	01/26/93	2227	12.67	74.5	3
VOLATILES (Q.A.)	KES	01/13/93	1756	01/14/92	1343	6.88	102.1	6

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up
Sample preservation and laboratory analysis conducted according to EPA
40 CFR Part 136 TEST/ANALYST/TIME/COEF. VAR.* QA PLAN filed with
ADPC*E. Include replication.

KES = K. E. Sorrells
JBS = James B. Sorrells
CAS = Cecil A. Sorrells
KES = Karl E. Sorrells

KESII = K. E. Sorrells
KEH = Kevin E. Hall
BWG = Ben W. Glover
CKS = Chandra K. Sorrells

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LITTLE ROCK, ARKANSAS 72209

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LABORATORY ANALYSIS

Date of Report: January 27, 1993
Date Received : January 13, 1993

For: UNITED TECHNOLOGIES CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-
Job: INDUSTRIAL WASTEWATER.
Sample From: EFFLUENT TO CITY SEWER.

ANALYTE		RESULT	UNITS	METHOD
Cadmium		1.500	ug/Liter	213.2
Chromium	<	1.000	ug/Liter	218.2
Copper		109.000	ug/Liter	220.1
Cyanide	<	0.020	mg/Liter	4500 E
Nickel		1365.000	ug/Liter	249.2
Zinc		284.000	ug/Liter	289.1
Silver	<	0.200	ug/Liter	272.2
Lead		25.000	ug/Liter	238.2
Oil and grease		11.300	mg/Liter	5520 B
pH		8.300	units	4500 B
Total suspended solids		14.200	mg/Liter	2540 D

Collected by:
CARL SORRELLS/MIKE DUMAS on 01/12/93
Analysis by :
K. E. Sorrells II/Kevin E. Hall/Ben W. Glover

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C.& E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained.
See Attached.

Copies to:
MIKE DUMAS
FACILITIES ENGINEER
CARRIER CORPORATION
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-

Laboratory Number: L277.002 DKS Reviewed By: K. E. Sorrells, M.S. [~] E

COMBINED WASTESTREAM FORMULA CALCULATIONS
Carrier Corporation
Arkadelphia, Arkansas

Alternate Concentration Limit Formula:

$$C_t = \frac{\sum_{i=1}^{N} C_i F_i}{\sum_{i=1}^{N} F_i} \times \frac{F_t - F_d}{F_t}$$

C_t = alternate concentration limit for the pollutant

C_i = Categorical Pretreatment Standard concentration

F_i = average daily flow of regulated stream i

F_d = average daily flow of dilute wastestream

F_t = average daily flow through combined treatment facility

N = number of combined streams

POLLUTANT: Cadmium

Maximum Concentration

$$C = \frac{0.11 \text{ mg/l} \times 35{,}163 \text{ gpd}}{35{,}163 \text{ gpd}} \times \frac{35{,}664 \text{ gpd} - 501 \text{ gpd}}{35{,}664 \text{ gpd}}$$

$C = 0.11 \text{ mg/l} \times 0.986$

$C = 0.109 \text{ mg/l}$

Average Concentratiom

$$C = \frac{0.07 \text{ mg/l} \times 35{,}163 \text{ gpd}}{35{,}163 \text{ gpd}} \times \frac{35{,}664 \text{ gpd} - 501 \text{ gpd}}{35{,}664 \text{ gpd}}$$

$C = 0.07 \text{ mg/l} \times 0.986$

$C = 0.069 \text{ mg/l}$

POLLUTANT: Chromium

Maximum Concentration

$$C = \frac{2.77 \text{ mg/l} \times 35{,}163 \text{ gpd}}{35{,}163 \text{ gpd}} \times \frac{35{,}664 \text{ gpd} - 501 \text{ gpd}}{35{,}664 \text{ gpd}}$$

$$C = 2.77 \text{ mg/l} \times 0.986$$

$$C = 2.73 \text{ mg/l}$$

Average Concentratiom

$$C = \frac{1.71 \text{ mg/l} \times 35{,}163 \text{ gpd}}{35{,}163 \text{ gpd}} \times \frac{35{,}664 \text{ gpd} - 501 \text{ gpd}}{35{,}664 \text{ gpd}}$$

$$C = 1.71 \text{ mg/l} \times 0.986$$

$$C = 1.69 \text{ mg/l}$$

POLLUTANT: Copper

Maximum Concentration

$$C = \frac{3.38 \text{ mg/l} \times 35{,}163 \text{ gpd}}{35{,}163 \text{ gpd}} \times \frac{35{,}664 \text{ gpd} - 501 \text{ gpd}}{35{,}664 \text{ gpd}}$$

$$C = 3.38 \text{ mg/l} \times 0.986$$

$$C = 3.33 \text{ mg/l}$$

Average Concentratiom

$$C = \frac{2.07 \text{ mg/l} \times 35{,}163 \text{ gpd}}{35{,}163 \text{ gpd}} \times \frac{35{,}664 \text{ gpd} - 501 \text{ gpd}}{35{,}664 \text{ gpd}}$$

$$C = 2.07 \text{ mg/l} \times 0.986$$

$$C = 2.04 \text{ mg/l}$$

Trescal

Certificate #: ***2525170001*** ***F***

17025 Compliant Certificate of Calibration

Acct #:	117971
Customer:	Danfoss Commercial Compressors
Shipper #:	
Address:	One Scroll Drive Arkadelphia, AR, 71923
Contact:	Darrell Hardage
PO #:	11326065

Manufacturer:	Master Meter
Model:	3in-MMT
Description:	Turbine Water Meter
Serial Number:	6168898
Asset Number:	6168898
Barcode:	

As Received		**As Returned**		**Action Taken**	
In Tolerance	X	In Tolerance	X	Full Calibration	X
Out of Tolerance		Out of Tolerance		Special Calibration	
Malfunctioning		Malfunctioning		Oper. Verification	
Operational		Operational		Adjusted	
Damaged		N/A		Repaired	
N/A				Charted	
				Returned As Is	

Cal Date:	01/17/2014
Due Date:	01/31/2015
Temperature:	
Humidity:	
Baro. Press.:	
Procedure:	
Reference:	
Dept:	

Incoming Remarks:

ndo/nas

Technical Remarks:

Compliant Calibration by Accredited Approved Vendor.

Calibration Standards Utilized

Cert. #	Manufacturer	Model #	Description	Cal Date	Due Date

The identified unit was calibrated by one of our approved suppliers. Refer to attached report for location.

Technician Name/Date: Alicia Avila, 01/23/2014 Signatory: Will Tyler QA Approved: DTI QA 39

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Fax 501-562-7025
Toll Free 1-800-331-8139

LABORATORY ANALYSIS

Date of Report: February 14, 2014
Date Received : January 8, 2014

For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 01/07-08/14 0600-0600

ANALYTE		RESULT	UNITS	METHOD
Acrolein	<	10.000	ug/Liter	8260B
Acrylonitrile	<	10.000	ug/Liter	8260B
Benzene	<	0.300	ug/Liter	8260Bb
Bromodichloromethane	<	0.300	ug/Liter	8260B
Bromoform	<	0.200	ug/Liter	8260B
Bromomethane (Methyl bromide)	<	0.600	ug/Liter	8260B
Carbon tetrachloride	<	0.600	ug/Liter	8260B
Chlorobenzene	<	0.600	ug/Liter	8260B
Chloroethane	<	1.300	ug/Liter	8260B
Chloroform		34.700	ug/Liter	8260B
Chloroethylvinyl ether, 2-	<	10.000	ug/Liter	8260B
Chloromethane (Methyl chloride)	<	0.400	ug/Liter	8260B
Chlorodibromomethane	<	0.400	ug/Liter	8260B
Dichloroethane, 1,1-	<	0.300	ug/Liter	8260B
Dichloroethylene, cis-1,2-	<	0.700	ug/Liter	8260B
Dichloroethane, 1,2-	<	0.300	ug/Liter	8260B
Dichloroethylene, trans-1,2-	<	0.700	ug/Liter	8260B
Dichloroethylene, 1,1- (1,1-dichloroethene)	<	0.300	ug/Liter	8260B
Dichloropropane, 1,2-	<	0.300	ug/Liter	8260B
Dichloropropylene, cis-1,3-	<	0.400	ug/Liter	8260B
Dichloropropylene, trans-1,3-	<	0.500	ug/Liter	8260B
Ethylbenzene	<	0.400	ug/Liter	8260B
Methylene chloride	<	1.000	ug/Liter	8260B
Tetrachloroethane, 1, 1, 2, 2	<	0.700	ug/Liter	8260B
Tetrachloroethylene	<	0.600	ug/Liter	8260B
Toluene	<	0.700	ug/Liter	8260B
Trichloroethane, 1, 1, 1-	<	0.300	ug/Liter	8260B
Trichloroethane, 1, 1, 2-	<	0.400	ug/Liter	8260B
Trichloroethylene	<	0.400	ug/Liter	8260B
Vinyl chloride	<	1.000	ug/Liter	8260B
Acenaphthene	<	0.300	ug/Liter	8270D
Acenaphthylene	<	0.800	ug/Liter	8270D

Laboratory Number: 16735.0001

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LABORATORY ANALYSIS

Date of Report: February 14, 2014
Date Received : January 8, 2014

For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 01/07-08/14 0600-0600

ANALYTE		RESULT	UNITS	METHOD
Anthracene	<	0.500	ug/Liter	8270D
Benzidine	<	5.000	ug/Liter	8270D
Benzo (a) anthracene	<	0.800	ug/Liter	8270D
Benzo (a) pyrene	<	1.000	ug/Liter	8270D
Benzo (b) fluoranthene	<	0.400	ug/Liter	8270D
Benzo (g,h,i) perylene	<	0.500	ug/Liter	8270D
Benzo (k) fluoranthene	<	0.400	ug/Liter	8270D
bis (2-chloroethoxy) methane	<	0.300	ug/Liter	8270D
bis (2-chloroethyl) ether	<	0.400	ug/Liter	8270D
bis (2-chloroisopropyl) ether	<	0.200	ug/Liter	8270D
bis (2-ethylhexyl) phthalate		33.400	ug/Liter	8270D
Bromophenyl phenyl ether, 4-	<	0.500	ug/Liter	8270D
Butylbenzyl phthalate	<	0.300	ug/Liter	8270D
Chloronaphthalene, 2-	<	0.400	ug/Liter	8270D
Chlorophenol, 2-	<	0.300	ug/Liter	8270D
Chlorophenyl phenyl ether, 4-	<	0.300	ug/Liter	8270D
Chrysene	<	0.400	ug/Liter	8270D
Dibenzo (a,h) anthracene	<	0.400	ug/Liter	8270D
Dichlorobenzene, 1,2-	<	0.300	ug/Liter	8260B
Dichlorobenzene, 1,3-	<	0.300	ug/Liter	8260B
Dichlorobenzene, 1,4-	<	0.300	ug/Liter	8260B
Dichlorobenzidine, 3,3-	<	0.900	ug/Liter	8270D
Dichlorophenol, 2,4-	<	0.300	ug/Liter	8270D
Diethylphthalate	<	0.500	ug/Liter	8270D
Dimethylphenol, 2,4-	<	0.200	ug/Liter	8270D
Dimethylphthalate	<	0.300	ug/Liter	8270D
Di-n-butyl phthalate		3.570	ug/Liter	8270D
Dinitro-o-cresol,4,6-	<	0.600	ug/Liter	8270D
Dinitrophenol, 2,4-	<	0.600	ug/Liter	8270D
Dinitrotoluene, 2,4-	<	0.100	ug/Liter	8270D
Dinitrotoluene, 2,6-	<	0.400	ug/Liter	8270D
Di-n-octyl phthalate	<	0.200	ug/Liter	8270D

Laboratory Number: 16735.0001

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LABORATORY ANALYSIS

Date of Report: February 14, 2014
Date Received : January 8, 2014

For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 01/07-08/14 0600-0600

ANALYTE		RESULT	UNITS	METHOD
Diphenylhydrazine, 1,2-	<	10.000	ug/Liter	8270D
Fluoranthene	<	0.300	ug/Liter	8270D
Fluorene	<	0.900	ug/Liter	8270D
Hexachlorobenzene	<	0.300	ug/Liter	8270D
Hexachlorobutadiene	<	0.600	ug/Liter	8260B
Hexachlorocyclopentadiene	<	0.200	ug/Liter	8270D
Hexachloroethane	<	0.300	ug/Liter	8270D
Indeno (1,2,3-Cd) pyrene	<	0.400	ug/Liter	8270D
Isophorone	<	0.200	ug/Liter	8270D
Naphthalene	<	1.000	ug/Liter	8260B
Nitrobenzene	<	0.300	ug/Liter	8270D
Nitrophenol, 2-	<	0.200	ug/Liter	8270D
Nitrophenol, 4-	<	10.000	ug/Liter	8270D
N-Nitrosodimethylamine	<	1.000	ug/Liter	8270D
N-nitrosodi-n-propylamine	<	0.500	ug/Liter	8270D
N-Nitrosodiphenylamine	<	0.400	ug/Liter	8270D
p-Chloro-m-cresol	<	0.400	ug/Liter	8270D
Pentachlorophenol	<	0.400	ug/Liter	8270D
Phenanthrene	<	0.500	ug/Liter	8270D
Phenol	<	0.400	ug/Liter	8270D
Pyrene	<	0.500	ug/Liter	8270D
Trichlorobenzene, 1, 2, 4-	<	0.300	ug/Liter	8260B
Trichlorophenol, 2, 4, 6-	<	0.400	ug/Liter	8270D
Aldrin	<	1.000	ug/Liter	8270Di
BHC, Alpha	<	1.000	ug/Liter	8270Di
BHC, Beta	<	1.000	ug/Liter	8270Di
BHC, Delta	<	1.000	ug/Liter	8270Di
BHC, Gamma (Lindane)	<	1.000	ug/Liter	8270Di
Chlordane	<	1.000	ug/Liter	8270Di
4, 4'-DDD	<	1.000	ug/Liter	8270Di
4, 4'-DDE	<	1.000	ug/Liter	8270Di
4, 4'-DDT	<	1.000	ug/Liter	8270Di

Laboratory Number: 16735.0001

SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES

CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS

8100 National Drive
Little Rock, Arkansas 72209

Phone 501-562-8139
Fax 501-562-7025
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LABORATORY ANALYSIS

Date of Report: February 14, 2014
Date Received : January 8, 2014

For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 01/07-08/14 0600-0600

ANALYTE		RESULT	UNITS	METHOD
Dieldrin	<	10.000	ug/Liter	8270Di
Endosulfan, Alpha-	<	1.000	ug/Liter	8270Di
Endosulfan, Beta-	<	1.000	ug/Liter	8270Di
Endosulfan sulfate	<	0.500	ug/Liter	8270Di
Endrin	<	0.500	ug/Liter	8270Di
Endrin aldehyde	<	0.500	ug/Liter	8270Di
Heptachlor	<	1.000	ug/Liter	8270Di
Heptachlor epoxide (beta)	<	1.000	ug/Liter	8270Di
2, 3, 7, 8- TCDD	<	0.200	ug/Liter	8270Di
Toxaphene	<	5.000	ug/Liter	8270Di
PCB-1016	<	1.000	ppm	8270Da
PCB-1221	<	1.000	ppm	8270Da
PCB-1232	<	1.000	ppm	8270Da
PCB-1242	<	1.000	ppm	8270Da
PCB-1248	<	1.000	ppm	8270Da
PCB-1254	<	1.000	ppm	8270Da
PCB-1260	<	1.000	ppm	8270Da
TTO, Total Toxic Organics	<	1.000	mg/Liter	Calc.
Extraction, Base-Neutrals, Acids	=	1.000	ea	3510
Extraction, Pesticides, PCB's	=	1.000	ea	3510

Laboratory Number:. 16735.0001

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ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 01/07-08/14 0600-0600

ANALYTE	RESULT	UNITS	METHOD

STANDARD METHODS, 20TH ED.; EPA METHODS, 3RD ED.
Collected by:
ADAM BRANSCUM on 01/08/14 at 12:26
Analysis by :
SEE ATTACHED QUALITY ASSURANCE PAGE.
Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with ADPC&E. Includes 10 % replication and 10 % recovery studies by random selection. Instruments maintained and calibrated and records kept.
See Attached.

Copies to:
MR. CHUCK JONES
ENV. HEALTH & SAFETY MGR

ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-

Laboratory Number: 16735.0001 TKR Reviewed By: K. E. Sorrells, M.S. [ ]

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QUALITY ASSURANCE

January 8, 2014
The following QA represents SRA's Quality Assurance values for this report.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	#IN BAT
Pesticides(Surr. Avg.)	CAS	01/21/14	630	01/21/14	1530	0.75	83.8	1
Semi-Volatiles (Surr. Avg	CAS	01/13/14	1018	01/14/14	1610	0.38	52.8	2
Volatiles (Surrogate Avg.	CAS	02/13/14	1306	02/13/14	1506	4.30	117.0	3

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up Sample preservation and laboratory analysis conducted according to EPA 40 CFR Part 136 TEST/ANALYST/TIME/COEF. VAR.* QA PLAN filed with ADPC&E. Include replication.

KES = K. E. Sorrells
JBS = James B. Sorrells
CAS = Cecil A. Sorrells
MKM = Mark Kyle McKenzie

KESII = K. E. Sorrells, II
TJS = Todd J. Sanders
JHD = J. Henry Dodson

Laboratory Number: 16735.0001 TKR

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LABORATORY ANALYSIS

Date of Report: February 14, 2014
Date Received : January 8, 2014

For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT GRAB / 01/08/14 1226

ANALYTE		RESULT	UNITS	METHOD
Biochemical oxygen demand		16.384	mg/Liter	5210 B
Total suspended solids		10.000	mg/Liter	2540D
Oil and grease - Gravimetric		3.800	mg/Liter	1664
Cyanide, total		0.014	mg/Liter	335.2
pH (-H+)		7.610	units	4500 B
Temperature		28.100	.C	2550 B
Arsenic, As		9.200	ug/Liter	200.8
Cadmium, Cd	<	0.100	ug/Liter	200.8
Chromium, Cr	<	0.100	ug/Liter	200.8
Copper, Cu		2.100	ug/Liter	200.8
Lead, Pb	<	0.100	ug/Liter	200.8
Manganese, Mn		233.100	ug/Liter	200.8
Nickel, Ni		113.800	ug/Liter	200.8
Silver, Ag	<	0.100	ug/Liter	200.8
Zinc, Zn		0.400	ug/Liter	200.8
Metals, Digestion for	=	1.000	ea sample	3030 D

Laboratory Number: 16735.0001A

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LABORATORY ANALYSIS

Date of Report: February 14, 2014
Date Received : January 8, 2014

For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT GRAB / 01/08/14 1226

ANALYTE	RESULT	UNITS	METHOD

STANDARD METHODS, 20TH ED.; EPA METHODS, 3RD ED.
Collected by:
ADAM BRANSCUM on 01/08/14 at 12:26
Analysis by :
SEE ATTACHED QUALITY ASSURANCE PAGE.
Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with ADPC&E. Includes 10 % replication and 10 % recovery studies by random selection. Instruments maintained and calibrated and records kept.
See Attached.

Copies to:
MR. CHUCK JONES
ENV. HEALTH & SAFETY MGR

ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-

Laboratory Number: 16735.0001A TKR Reviewed By: K. E. Sorrells, M.S. [ ]

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QUALITY ASSURANCE

January 8, 2014
The following QA represents SRA's Quality Assurance values for this report.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	#IN BAT
Biochemical oxygen demand	AB	01/08/14	1515	01/13/14	1000	4.26	104.0	4
Cyanide, total	MH	01/13/14	930	01/20/14	1000	2.16	97.5	1
ICP-MS METALS	CS/ED	01/15/14	1530	01/15/14	1833	2.20	102.2	33
Oil and grease - Gravimet	MH	01/13/14	950	01/20/14	1000	0.64	96.8	11
pH <-H+>	AB	01/08/14	1226	01/08/14	1240	0.00	0.0	1
Total suspended solids	ED	01/23/14	1200	01/23/14	1700	0.94	90.0	54
Temperature	AB	01/08/14	1226	01/08/14	1240	0.00	0.0	1

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up
Sample preservation and laboratory analysis conducted according to EPA
40 CFR Part 136 TEST/ANALYST/TIME/COEF. VAR.* QA PLAN filed with
ADPC&E. Include replication.

KES = K. E. Sorrells
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Laboratory Number: 16735.0001A TKR

SORRELLS RESEARCH ASSOCIATES, INC
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CHAIN OF CUSTODY RECORD

TURN AROUND TIME
RUSH 24HR. 48 HR.
5 DAY REG
OTHER_____

FOR LAB/OFFICE USE ONLY
LAB # 16735.0001-0001A
CLIENT # 41017
P.O.#_____

STANDARD METHODS PRESERVATION PER EPA 40 CFR
C 4= COOL TO 4.C
S<2= SULFURIC ACID TO pH<2
N<2= NITRIC ACID TO pH<2
T= THIOSULFATE FOR DECHLORINATION
W= WINKLER AZIDE MODIFICATION
P= MEMBRANE ELECTRODE
NaOH= pH >12

NAME OF COMPANY, CITY, OR PROJECT: Danfoss Scroll Technologies
PROJECT NO: 110913k2
SAMPLER(S) NAME: (PRINT) Adam Bromsen

SAMPLE NO:	SAMPLE ID AND/ OR COLLECTION LOCATION	START DATE/TIME	END DATE/TIME	COMP GRAB	FIELD ANALYSIS pH	TEMP	FLOW	CL2	D.O (W) D.O(P)	CONTAINER TYPE PRESERVATIVE	ANALYSIS REQUIRED
	Outfall 001	1-8-14	1-8-14	C						1 qt.	BOD,TSS
		1226	1240	C						50 mL	metals
				C						1 L amber narrow	TTO
				G						1 L amber s<2	O&G
				G						500 mL NaOH	CN
				G						(2) 40 mL vials	TTO
				G	7.61	28.1			W	onsite	pH, temp

METHOD OF SHIPMENT (CIRCLE)
FED EX WALK IN SRA UPS OTHER

TYPE OF SAMPLE(S): (CIRCLE)
WATER SOIL W/W SLUDGE OTHER

FIELD CALIBRATION RECORD

pH 7	7.00		
pH 4	4.01		
pH 10	10.00	See log	
D.O			

NOTES/COMMENTS/OBSERVATIONS
All containers at C4

FIELD ANALYSIS CONDUCTED BY: (CIRCLE) SRA CLIENT

RELINQUISHED BY: _____ DATE/TIME: _____ RECEIVED BY: _____ DATE/TIME: 1240 1-8-14

RELINQUISHED BY: _____ DATE/TIME: _____ RECEIVED BY(LAB): _____ DATE/TIME: 1-8-14 1440

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LABORATORY ANALYSIS

Date of Report: March 19, 2014
Date Received : February 5, 2014

For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 02/04-05/14 0600-0600

ANALYTE		RESULT	UNITS	METHOD
Acrolein	<	10.000	ug/Liter	8260B
Acrylonitrile	<	10.000	ug/Liter	8260B
Benzene	<	0.300	ug/Liter	8260B
Bromodichloromethane	<	0.300	ug/Liter	8260B
Bromoform	<	0.200	ug/Liter	8260B
Bromomethane (Methyl bromide)	<	0.600	ug/Liter	8260B
Carbon tetrachloride	<	0.600	ug/Liter	8260B
Chlorobenzene	<	0.600	ug/Liter	8260B
Chloroethane	<	1.300	ug/Liter	8260B
Chloroform	<	2.000	ug/Liter	8260B
Chloroethylvinyl ether, 2-	<	10.000	ug/Liter	8260B
Chloromethane (Methyl chloride)	<	0.400	ug/Liter	8260B
Chlorodibromomethane	<	0.400	ug/Liter	8260B
Dichloroethane, 1,1-	<	0.300	ug/Liter	8260B
Dichloroethylene, cis-1,2-	<	0.700	ug/Liter	8260B
Dichloroethane, 1,2-	<	0.300	ug/Liter	8260B
Dichloroethylene, trans-1,2-	<	0.700	ug/Liter	8260B
Dichloroethylene, 1,1- (1,1-dichloroethene)	<	0.300	ug/Liter	8260B
Dichloropropane, 1,2-	<	0.300	ug/Liter	8260B
Dichloropropylene, cis-1,3-	<	0.400	ug/Liter	8260B
Dichloropropylene, trans-1,3-	<	0.500	ug/Liter	8260B
Ethylbenzene	<	0.400	ug/Liter	8260B
Methylene chloride	<	1.000	ug/Liter	8260B
Tetrachloroethane, 1, 1, 2, 2	<	0.700	ug/Liter	8260B
Tetrachloroethylene	<	0.600	ug/Liter	8260B
Toluene	<	0.700	ug/Liter	8260B
Trichloroethane, 1, 1, 1-	<	0.300	ug/Liter	8260B
Trichloroethane, 1, 1, 2-	<	0.400	ug/Liter	8260B
Trichloroethylene	<	0.400	ug/Liter	8260B
Vinyl chloride	<	1.000	ug/Liter	8260B
Acenaphthene	<	0.300	ug/Liter	8270D
Acenaphthylene	<	0.800	ug/Liter	8270D

Laboratory Number: 16828.0001

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LABORATORY ANALYSIS

Date of Report: March 19, 2014
Date Received : February 5, 2014

For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 02/04-05/14 0600-0600

ANALYTE		RESULT	UNITS	METHOD
Anthracene	<	0.500	ug/Liter	8270D
Benzidine	<	5.000	ug/Liter	8270D
Benzo (a) anthracene	<	0.800	ug/Liter	8270D
Benzo (a) pyrene	<	1.000	ug/Liter	8270D
Benzo (b) fluoranthene	<	0.400	ug/Liter	8270D
Benzo (g,h,i) perylene	<	0.300	ug/Liter	8270D
Benzo (k) fluoranthene	<	0.400	ug/Liter	8270D
bis (2-chloroethoxy) methane	<	0.300	ug/Liter	8270D
bis (2-chloroethyl) ether	<	0.400	ug/Liter	8270D
bis (2-chloroisopropyl) ether	<	0.200	ug/Liter	8270D
bis (2-ethylhexyl) phthalate		27.360	ug/Liter	8270D
Bromophenyl phenyl ether, 4-	<	0.500	ug/Liter	8270D
Butylbenzyl phthalate		6.750	ug/Liter	8270D
Chloronaphthalene, 2-	<	0.400	ug/Liter	8270D
Chlorophenol, 2-	<	0.300	ug/Liter	8270D
Chlorophenyl phenyl ether, 4-	<	0.300	ug/Liter	8270D
Chrysene	<	0.400	ug/Liter	8270D
Dibenzo (a,h) anthracene	<	0.400	ug/Liter	8270D
Dichlorobenzene, 1,2-	<	0.300	ug/Liter	8260B
Dichlorobenzene, 1,3-	<	0.300	ug/Liter	8260B
Dichlorobenzene, 1,4-	<	0.900	ug/Liter	8260B
Dichlorobenzidine, 3,3-	<	5.000	ug/Liter	8270D
Dichlorophenol, 2,4-	<	0.300	ug/Liter	8270D
Diethylphthalate		3.050	ug/Liter	8270D
Dimethylphenol, 2,4-	<	0.200	ug/Liter	8270D
Dimethylphthalate	<	0.300	ug/Liter	8270D
Di-n-butyl phthalate		5.940	ug/Liter	8270D
Dinitro-o-cresol,4,6-	<	0.600	ug/Liter	8270D
Dinitrophenol, 2,4-	<	0.600	ug/Liter	8270D
Dinitrotoluene, 2,4-	<	0.100	ug/Liter	8270D
Dinitrotoluene, 2,6-	<	0.400	ug/Liter	8270D
Di-n-octyl phthalate	<	0.200	ug/Liter	8270D

Laboratory Number: 16828.0001

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LABORATORY ANALYSIS

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For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 02/04-05/14 0600-0600

ANALYTE		RESULT	UNITS	METHOD
Diphenylhydrazine, 1,2-	<	10.000	ug/Liter	8270D
Fluoranthene	<	0.300	ug/Liter	8270D
Fluorene	<	0.900	ug/Liter	8270D
Hexachlorobenzene	<	0.300	ug/Liter	8270D
Hexachlorobutadiene	<	0.600	ug/Liter	8260B
Hexachlorocyclopentadiene	<	0.200	ug/Liter	8270D
Hexachloroethane	<	0.300	ug/Liter	8270D
Indeno (1,2,3-Cd) pyrene	<	0.400	ug/Liter	8270D
Isophorone	<	0.200	ug/Liter	8270D
Naphthalene	<	1.000	ug/Liter	8260B
Nitrobenzene	<	0.300	ug/Liter	8270D
Nitrophenol, 2-	<	0.200	ug/Liter	8270D
Nitrophenol, 4-	<	10.000	ug/Liter	8270D
N-Nitrosodimethylamine	<	1.000	ug/Liter	8270D
N-nitrosodi-n-propylamine	<	0.500	ug/Liter	8270D
N-Nitrosodiphenylamine	<	0.400	ug/Liter	8270D
p-Chloro-m-cresol	<	0.400	ug/Liter	8270D
Pentachlorophenol	<	0.400	ug/Liter	8270D
Phenanthrene	<	0.500	ug/Liter	8270D
Phenol		12.660	ug/Liter	8270D
Pyrene	<	0.500	ug/Liter	8270D
Trichlorobenzene, 1, 2, 4-	<	0.300	ug/Liter	8260B
Trichlorophenol, 2, 4, 6-	<	0.400	ug/Liter	8270D
Aldrin	<	1.000	ug/Liter	8270Di
BHC, Alpha	<	1.000	ug/Liter	8270Di
BHC, Beta	<	1.000	ug/Liter	8270Di
BHC, Delta	<	1.000	ug/Liter	8270Di
BHC, Gamma (Lindane)	<	1.000	ug/Liter	8270Di
Chlordane	<	1.000	ug/Liter	8270Di
4, 4'-DDD	<	1.000	ug/Liter	8270Di
4, 4'-DDE	<	1.000	ug/Liter	8270Di
4, 4'-DDT	<	1.000	ug/Liter	8270Di

Laboratory Number: 16828.0001

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LABORATORY ANALYSIS

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ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 02/04-05/14 0600-0600

ANALYTE		RESULT	UNITS	METHOD
Dieldrin	<	10.000	ug/Liter	8270Di
Endosulfan, Alpha-	<	1.000	ug/Liter	8270Di
Endosulfan, Beta-	<	1.000	ug/Liter	8270Di
Endosulfan sulfate	<	0.500	ug/Liter	8270Di
Endrin	<	0.500	ug/Liter	8270Di
Endrin aldehyde	<	0.500	ug/Liter	8270Di
Heptachlor	<	1.000	ug/Liter	8270Di
Heptachlor epoxide (beta)	<	1.000	ug/Liter	8270Di
2, 3, 7, 8- TCDD	<	1.000	ug/Liter	8270Di
Toxaphene	<	5.000	ug/Liter	8270Di
PCB-1016	<	1.000	ppm	8270Da
PCB-1221	<	1.000	ppm	8270Da
PCB-1232	<	1.000	ppm	8270Da
PCB-1242	<	1.000	ppm	8270Da
PCB-1248	<	1.000	ppm	8270Da
PCB-1254	<	1.000	ppm	8270Da
PCB-1260	<	1.000	ppm	8270Da
TTO, Total Toxic Organics		0.056	mg/Liter	Calc.
Extraction, Base-Neutrals, Acids	=	1.000	ea	3510
Extraction, Pesticides, PCB's	=	1.000	ea	3510

Laboratory Number: 16828.0001

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SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES

8100 National Drive
Little Rock, Arkansas 72209

Phone 501-562-8139
Fax 501-562-7025
Toll Free 1-800-331-8139

LABORATORY ANALYSIS

Date of Report: March 19, 2014
Date Received : February 5, 2014

For: DANFOSS - SCROLL TECHNOLOGIES
ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-8813
Job: INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / COMP 02/04-05/14 0600-0600

ANALYTE	RESULT	UNITS	METHOD

STANDARD METHODS, 20TH ED.; EPA METHODS, 3RD ED.
Collected by:
ADAM BRANSCUM on 02/05/14 at 13:15
Analysis by :
SEE ATTACHED QUALITY ASSURANCE PAGE.
Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 136. Test/Analyst/Time/Coeff./Var./ QA plan filed with ADPC&E. Includes 10 % replication and 10 % recovery studies by random selection. Instruments maintained and calibrated and records kept.
See Attached.

Copies to:
MR. CHUCK JONES
ENV. HEALTH & SAFETY MGR

ONE SCROLL DRIVE
ARKADELPHIA, AR 71923-

Laboratory Number: 16828.0001 TKR Reviewed By: K. E. Sorrells, M.S. [ ]

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QUALITY ASSURANCE

February 5, 2014
The following QA represents SRA's Quality Assurance values for this report.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	#IN BAT
Pesticides(Surr. Avg.)	CAS	03/07/14	1510	03/07/14	1750	4.15	84.6	2
Semi-Volatiles (Surr. Avg	CAS	03/07/14	1035	03/07/14	1310	6.33	89.1	2
Volatiles (Surrogate Avg.	CAS	02/13/14	1306	02/13/14	1506	4.30	117.0	3

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up Sample preservation and laboratory analysis conducted according to EPA 40 CFR Part 136 TEST/ANALYST/TIME/COEF. VAR.* QA PLAN filed with ADPC&E. Include replication.

KES = K. E. Sorrells
JBS = James B. Sorrells
CAS = Cecil A. Sorrells
MKM = Mark Kyle McKenzie

KESII = K. E. Sorrells, II
TJS = Todd J. Sanders
JHD = J. Henry Dodson

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Job:INDUSTRIAL WASTEWATER ANALYSIS / P.O.#8585034
Sample From: EFFLUENT / GRAB 02/05/14 1315

ANALYTE		RESULT	UNITS	METHOD
Biochemical oxygen demand		29.500	mg/Liter	5210 B
Total suspended solids		26.000	mg/Liter	2540D
Oil and grease - Gravimetric		2.600	mg/Liter	1664
Cyanide, total		0.013	mg/Liter	335.2
pH (-H+)		7.280	units	4500 B
Temperature		29.700	.C	2550 B
Arsenic, As		8.500	ug/Liter	200.8
Cadmium, Cd	<	1.000	ug/Liter	200.8
Chromium, Cr	<	1.000	ug/Liter	200.8
Copper, Cu		22.300	ug/Liter	200.8
Lead, Pb	<	1.000	ug/Liter	200.8
Manganese, Mn		1755.000	ug/Liter	200.8
Nickel, Ni		128.300	ug/Liter	200.8
Silver, Ag	<	1.000	ug/Liter	200.8
Zinc, Zn		20.400	ug/Liter	200.8
Metals, Digestion for	=	1.000	ea sample	3030 D

Laboratory Number: 16828.0001A

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February 5, 2014
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ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	#IN BAT
Biochemical oxygen demand	ED/AB	02/05/14	1440	02/10/14	1205	13.80	108.0	3
Cyanide, total	MH	02/10/14	930	02/12/14	1615	1.40	98.6	1
ICP-MS METALS	CS/ED	03/14/14	1041	03/14/14	1340	0.80	97.9	40
Oil and grease - Gravimet	MH	02/10/14	900	02/13/14	1615	1.80	96.7	16
pH <-H+>	AB	02/05/14	1300	02/05/14	1315	0.00	0.0	1
Total suspended solids	EAS	02/19/14	950	02/20/14	1200	4.70	107.7	48
Temperature	AB	02/05/14	1300	02/05/14	1315	0.00	0.0	1

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SORRELLS RESEARCH ASSOCIATES, INC
8100 NATIONAL DRIVE, LITTLE ROCK, AR 72209
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CHAIN OF CUSTODY RECORD

TURN AROUND TIME
RUSH 24HR. 48 HR.
5 DAY REG
OTHER_____

FOR LAB/OFFICE USE ONLY
LAB # 16928.0001 -0001A
CLIENT # 41017
P.O.#_____

STANDARD METHODS PRESERVATION PER EPA 40 CFR
C 4= COOL TO 4.C
S<2= SULFURIC ACID TO pH<2
N<2= NITRIC ACID TO pH<2
T= THIOSULFATE FOR DECHLORINATION
W= WINKLER AZIDE MODIFICATION
P= MEMBRANE ELECTRODE
NaOH= pH >12

110913k2

NAME OF COMPANY, CITY, OR PROJECT: Danfoss Scroll Technologies
PROJECT NO:
SAMPLER(S) NAME: (PRINT) Adam Brandon

SAMPLE NO:	SAMPLE ID AND/ OR COLLECTION LOCATION	START DATE/TIME	END DATE/TIME	COMP GRAB	FIELD ANALYSIS pH	TEMP	FLOW	CL2	D.O (W) D.O(P)	CONTAINER TYPE PRESERVATIVE	ANALYSIS REQUIRED
	Outfall 001	02/04/14	02/05/14	C						1 qt.	BOD,TSS
		0600	0600	C						50 mL	metals
		1	1	C						1 L amber narrow	TTO
		2-5-14	2-5-14	G						1 L amber s<2	O&G
		1300	1315	G						500 mL NaOH	CN
		1	1	G						(2) 40 mL vials	TTO
		1	1	G	7.28	29.7	CI			onsite	pH, temp

METHOD OF SHIPMENT (CIRCLE)
FED EX WALK IN SRA UPS OTHER

TYPE OF SAMPLE(S): (CIRCLE)
WATER SOIL W/W SLUDGE OTHER

FIELD CALIBRATION RECORD

pH 7	7.00		
pH 4	4.01	Set	
pH 10	10.00		
D.O			

NOTES/COMMENTS/OBSERVATIONS
All containers at C4

FIELD ANALYSIS CONDUCTED BY: (CIRCLE) SRA CLIENT

RELINQUISHED BY: _____ DATE/TIME: _____ RECEIVED BY: _____ DATE/TIME: 1315 2-5-14

RELINQUISHED BY: _____ DATE/TIME: _____ RECEIVED BY(LAB): _____ DATE/TIME: 2-5-14 1500

EFFLUENT SAMPLING December, 2011 THROUGH November 2012										
ATTRIBUTE	**CADMIUM**	**CHROME**	**COPPER**	**LEAD**	**NICKEL**	**SILVER**	**ZINC**	**CYANIDE**	**TTO**	**ARSENIC**
12/7/2011	0.000100	0.000100	0.010600	0.000100	0.039500	0.000100	0.019500	0.013000	0.023000	0.000100
1/4/2012	0.003300	0.000100	0.016300	0.002410	0.089700	0.000100	0.076000	0.005000	0.020000	0.003500
2/1/2012	0.004500	0.778000	0.057800	0.006960	0.046000	0.000100	0.005000	0.000100	1.000000	0.007870
3/7/2012	0.000100	0.000100	0.058800	0.010800	0.043300	0.000100	0.077400	0.009000	0.046000	0.005200
4/11/2012	0.000100	0.000100	0.023400	0.000100	0.054800	0.000100	0.053400	0.000600	0.026000	0.009820
5/2/2012	0.000100	0.958000	0.017400	0.000100	0.081000	0.000100	0.235100	0.009000	0.005000	0.011700
6/6/2012	0.000100	0.000100	0.015200	0.000100	0.078800	0.000100	0.432000	0.011000	0.041000	0.004500
7/5/2012	0.000100	0.000100	0.015000	0.000100	0.094600	0.000100	0.704000	0.009000	0.246000	0.007400
8/1/2012	0.001080	0.001360	0.002090	0.000570	0.010700	0.000100	0.206500	0.000000	0.028000	0.000230
9/1/2012	0.004300	0.008000	0.014400	0.010200	0.085000	0.000100	0.150000	0.011000	0.016000	0.003300
10/1/2012	0.000100	0.002300	0.012300	0.000100	0.076200	0.000100	0.117000	0.009000	1.000000	0.004700
11/1/2012	0.000100	0.001300	0.015200	0.000100	0.084000	0.000100	0.250400	0.021000	1.200000	0.050000
12/1/2012	0.001360	0.003250	0.019800	0.005430	0.037800	0.000100	0.138800	0.000100	1.800000	0.014600
AMMC MAXIMUM ug/L	0.004500	0.958000	0.058800	0.010800	0.094600	0.000100	0.704000	0.021000	1.800000	0.050000
AMAC AVERAGE ug/L	0.001180	0.134832	0.021407	0.002852	0.063185	0.000100	0.189623	0.007523	0.419308	0.009455