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Project No. 1252

SOURCE EVALUATION REPORT

WACKER SILTRONICS CORPORATION

NO_x Scrubber System Outlet
Nitrogen Oxides
CEMS Relative Accuracy Test

June 4, 1999

Prepared for
Wacker Siltronics Corporation
7200 NW Front
Portland, Oregon 97283

by
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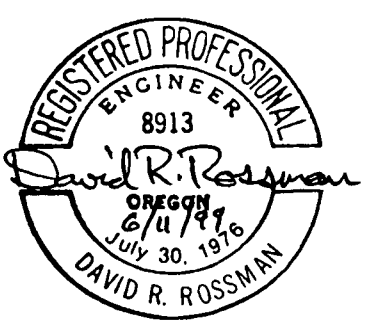

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Air Pollution Emission Testing • Infrared Inspections • Mechanical Engineering

Introduction

Relative accuracy (RA) tests were made at the Wacker Siltronics plant in Portland, Oregon to confirm the accuracy of their continuous emission monitoring system (CEMS) for nitrogen oxides (NO_x). Tests for NO_x and volume flow rate were necessary to determine the emission rate from the scrubber

The system was tested on June 4, 1999 to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for relative accuracy (RA) testing.

Horizon Engineering personnel Kurt Torgerson did the field work. Susan Mulholland was the site contact person at Wacker Siltronics and she coordinated plant operation and data acquisition for the CEMS. Dan Fuller monitored process data and assisted in the data collection.

Summary of Results

The results show that the NO_x monitoring system meets the performance standards in terms of the RA (maximum allowed difference) of less than 20% for concentration, flow rate and NO_x emission rate. Table 1 summarizes the results of the testing. Run 7 was aborted due to Fabrications 1 and 2 being down because of an acid dump during the run.

Table 1

Relative Accuracy Test Results

NO_x Scrubber Outlet

Test Date: June 4, 1999

	All 9 Runs
NO_x Concentration (ppmv)	
Actual difference	-0.81
RA based on mean value (%)	8.1
Volume Flow Rate (dscf/min)	
Actual difference	-148
RA based on mean value (%)	2.4
NO_x Emission Rate (lb/hr)	
Actual difference	-0.09
RA based on mean value (%)	10.1
RA allowable, based on mean value (%)	20
Average NO_x emission rate, lb/hr	1.5
Allowable NO_x emission rate, lb/hr*	5.4

* Permit limit cited is based on 130 lb/day for "wafer manufacturing process"

Description of the Source and its Operation

NO_x-contaminated air is pulled through a three-stage packed-bed scrubber system by a fan located upstream from the sampling port and downstream from the last scrubber stage. The liquid chemicals and NO_x-air mixture flow in different directions and have a high residence time in the scrubbers due to the packed beds. This system works to reduce NO_x emissions to well below Permit standards.

Sampling and Analytical Procedures

General The work was done according to guidelines of Performance Specification 2 (CFR 40, Pt. 60, Appendix B) for NO_x. EPA Reference Method 7E was used to determine NO_x with EPA Methods 1 and 2 and ODEQ Method 4 for determining the flow rates. The RA testing consisted of ten 23-minute sampling runs (21 minutes plus twice the response time of the system). Averages were based on the middle 21 minutes of each run. The table below describes the gas analyzer used.

Gas	Brand	Model	Range	Measurement Method	Method
NO_x	Thermo Env.	10/AR	0-100 ppm	Chemiluminescent	7E

A probe was prepared for the testing by drilling holes at three points (16.7%, 50%, 83.3% of stack diameter) as specified in the method. Gas sample was drawn into an ice-cooled condenser (to remove moisture) by a Teflon-lined sample pump and was pulled through a 75-ft. Teflon umbilical to the instrument van on the ground.

The NO_x analyzer was first calibrated with certified calibration gas. Then the entire sampling system was verified by introducing calibration gas near the sampling probe inlet. This bias check was conducted before and after every test run. The results of all calibrations are included in the Appendix.

Flow Rate The volume flow rate was measured at the end of each run. An S-type pitot, described in EPA Method 2, was used for the measurements. A Magnehelic differential pressure gauge indicated the velocity pressures at each traverse point location. Eight points on each diameter were checked. Wet and dry bulb temperatures were measured with k-type thermocouples and a Fluke Model 52 digital thermocouple indicator.

Data The analyzer output was read every five seconds during the tests by a Rustrak Ranger II data logger. Printouts of the plots from the data logger are in the Appendix. After completion of all the testing, data sets from the plant CEMS were generated and passed along to us by the Wacker technicians.

Calculations The data sets were compared using the formulas in Performance Specification 2. Results worksheets, in the Appendix, include calculations using all test data sets.

Discussion

The results of the tests show that the NO_x CEMS is operating within the allowable specifications. As previously mentioned, Run 7 was aborted due to an acid dump during the run. All Reference Method instrument calibrations and all testing parameters were within specifications. Measured emissions for the 9 test runs averaged 1.5 lb/hr. The Permit limit for the source is about 5.4 lb/hr (based on the daily allowable rate).

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APPENDIX

Nomenclature & Drift Documentation

Gases

- RA Results
- Wacker Siltronics Data
- Client Data Averages
- Data Logger Plots
- Field Data
- NOx Converter Efficiency Test Results
- Magnehelic Calibrations

Flow Rates

- Calculations
- Field Data

Calibration Gas Certificates

QA/QC Documentation

NOMENCLATURE
AND
DRIFT DOCUMENTATION

Nomenclature

Constants	Value	Units	Definition	Ref
Pstd(1)	29.92129	inHg	Standard Pressure	CRC
Pstd(2)	2116.22	lbf / ft²		CRC
Tstd	527.67	°R	Standard Temperature	CRC
R	1545.33	ft lbf / lbmol °R	Ideal Gas Constant	CRC
MWatm	28.965	lbm / lbmole	Atmospheric (20.946 %O2, 0.033% CO2, Balance N2+Ar)	
MWc	12.011	lbm / lbmole	Carbon	CRC
MWco	28.010	lbm / lbmole	Carbon Monoxide	CRC
MWco2	44.010	lbm / lbmole	Carbon Dioxide	CRC
MWh2o	18.015	lbm / lbmole	Water	CRC
MWno2	46.006	lbm / lbmole	Nitrogen Dioxide	CRC
MWo2	31.999	lbm / lbmole	Oxygen	CRC
MWso2	64.063	lbm / lbmole	Sulfur Dioxide	CRC
MWn2+ar	28.154	lbm / lbmole (Balance with 98.82% N2 & 1.18% Ar)	Emission balance	
C1	385.3211	ft³ / lbmol	Ideal Gas Constant @ Standard Conditions	
C2	816.5455	inHg in³/ °R ft³	Isokentics units correction constant	
Kp	5129.4	ft / min [(inHg lbm/mole) / (°R inH2O)] ^½	Pitot tube constant	Ref 2.5.1

Symbol	Units	Definition	Calculating Equation or Source of Data	EPA
As	in²	Area, Stack		
An	in²	Area, Nozzle		
Bws	%	Moisture, % Stack gas	[100 Vw(std) / [Vw(std)+Vm(std)]]	Eq. 5-3
C	ppmv-C	Carbon (General Reporting Basis for Organics)		
C1	ft3/lbmol	Gas Constant @ Standard Conditions	[R Tstd / Pstd(2)]	
C2	inHg in²/ °R ft³		[14,400 Pstd / Tstd]	
Cd	lbm-GAS / MMdscf	Mass of gas per unit volume	[Cgas MWgas / C1]	
cg	gr/dscf	Grain Loading, Actual	[15.432 mn / Vm(std) 1,000]	Eq. 5-6
cg @ X%CO2	gr/dscf	Grain Loading Corrected to X% Carbon Dioxide	[X% / CO2%]	
cg @ X%O2	gr/dscf	Grain Loading Corrected to X% Oxygen	[(20.946-X%) / (20.946-O2%)]	
Cgas	ppmv, %	Gas Concentration, (Corrected)		
Cgas @ X%CO2	ppmv	Gas Concentration Correction to X% Carbon Dioxide	[X% / CO2%]	
Cgas @ X%O2	ppmv	Gas Concentration Correction to X% Oxygen	[(20.946-X%) / (20.946-O2%)]	
CO	ppmv	Carbon Monoxide		
Co	ft	Outer Circumference of Circular Stack		
Ci	ft	Inner Circumference of Circular Stack		
CO2	%	Carbon Dioxide		
Cp		Pitot tube coefficient		
Ct	lb/hr	Particulate Mass Emissions	[60 cg Qsd/ 7,000]	
dH	in H2O	Pressure differential across orifice		
Dn	in	Diameter, Nozzle		
dp^½		Average square root of velocity pressure		
Ds	in	Diameter, Stack		
E	lb / MMBtu	Pollutant Emission Rate	Cgas Fd MWgas (20.946 / (20.946-O2%)) / (1,000,000 C1)	
Fd	dscf / MMBtu	F Factor for Various Fuels		Table 19-1
I	%	Percent Isokinetic	[C2 Ts(abs) Vm(std) / (vs Ps mfg An Ø)]	Eq. 5-8*
Md	lbm / lbmole	Molecular weight, Dry Stack Gas	[(1-%O2-%CO2)(MWn2+ar)+(%O2 MWo2)+(%CO2 MWco2)]	Eq. 3-1*
mfg		Mole fraction of dry stack gas	[1-Bws/100]	
Mgas	lbm/hr	Gaseous Mass Emisisons	[60 Cgas(ppmv) MW Pstd(2) Qsd / 1,000,000 R Tstd]	
mn	mg	Particulate lab sample weight		
Ms	lbm / lbmole	Molecular weight, Wet Stack	[Md.mfg +MWh2o (1-mfg)]	Eq. 2-5
MW	lbm / lbmole	Molecular Weight		
NO2	ppmv-NO2	Nitrogen Dioxide (General Reporting Basis for NOx)		
NOx	ppmv-NO2	Nitrogen Oxides (Reported as NO2)		
O2	%	Oxygen		
OPC	%	Opacity		
Pbar	in Hg	Pressure, Barometric		
Pg	in H2O	Pressure, Static Stack		
Po	in Hg	Pressure, Absolute across Orifice	[Pbar+dH/13.5955]	
Ps	in Hg	Pressure, Absolute Stack	[Pbar+Pg/13.5955]	Eq. 2-6*
Qa	acf/min	Volumetric Flowrate, Actual	[As vs / 144]	
Qsd	dscf/min	Volumetric Flowrate, Dry Standard	[Qa Tstd mfg Ps] / [Pstd(1) Ts(abs)]	Eq 2-10*
Rf	MMBtu/hr		[1,000,000 Mgas (20.946-O2)]/[Cd Fd 20.946]	
SO2	ppmv-SO2	Sulfur Dioxide		
t	in	Wall thickness of a stack or duct		
TGOC	ppmv-C	Total Gaseous Organic Concentration (Reported as C)		
Tm	°F	Temperature, Dry gas meter		
Tm(abs)	°R	Temperature, Absolute Dry Meter	[Tm + 459.67]	
Ts	°F	Temperature, Stack gas		
Ts(abs)	°R	Temperature, Absolute Stack gas	[Ts + 459.67]	
Vlc	ml	Volume of condensed water		
Vm	dcf	Volume, Gas sample		
Vm(std)	dscf	Volume, Dry standard gas sample	[Y Vm Tstd Po]/[Pstd(1) Tm(abs)]	Eq. 5-1
vs	fpm	Velocity, Stack gas	Kp Cp dp^½ [Ts(abs) / (Ps Ms)]^ ½	Eq. 2-9*
Vw(std)	scf	Volume, Water Vapor	0.04707 Vlc	Eq. 5-2
Y		Dry gas meter calibration factor		Fig. 5.6
Ø	min	Time, Total sample		

* Based on equation.

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DRIFT CORRECTION DOCUMENTATION

EPA Drift Equations:

- Method 3A: Oxygen and Carbon Dioxide

$$C_{gas} = \frac{(C_{ma} - C_{oa})(C - C_m) + C_{ma}}{(C_m - C_o)} \qquad \text{(Eq. 3A-1)}$$

- Method 6C: Sulfur Dioxide

$$C_{gas} = \frac{C_{ma}(C - C_o)}{(C_m - C_o)} \qquad \text{where } C_{oa} = 0 \qquad \text{(Eq. 6C-1)}$$

- Method 7E: Nitrogen Oxides, Section 8 of Method 7E states: "Follow Section 8 of Method 6C (Eq. 6C-1)"
- Method 10: Carbon Monoxide, the EPA does not currently address Gas Filter Correlation instruments, therefore there are no current standards.
- Method 25A: Total Gaseous Organic Concentration (TGOC), this method does not mention correcting for drift although there are established limits.

Horizon Engineering Drift Correction Equations:

$$C_{gas} = \frac{(C_{id} - Z_x)(C_{ma} - C_{oa})}{(S_x - Z_x)} \qquad S_x = \frac{C_{mf} - C_{mi})(T_x - T_{ci})}{(T_{cf} - T_{ci})} + C_{mi}$$

$$Z_x = \frac{(C_{of} - C_{oi})(T_x - T_{ci})}{(T_{cf} - T_{ci})} - + C_{oi} \qquad T_x = \frac{(T_{te} - T_{ts})}{2} + T_{ts}$$

EPA	Definition	Horizon
C_{gas}	Effluent gas concentration, dry basis	C_{gas}
C_{ma}	Actual upscale calibration gas concentration	C_{ma}
C_{oa}	Actual zero/low calibration gas concentration	C_{oa}
C_m	Average of initial and final system upscale calibration bias responses	
	Initial system upscale calibration bias response	C_{mi}
	Final system upscale calibration bias response	C_{mf}
C_o	Average of initial and final system zero/low calibration bias responses	
	Initial system zero/low calibration bias response	C_{oi}
	Final system zero/low calibration bias response	C_{of}
C	Average gas concentration indicated by gas analyzer, dry basis	C_{id}
	Starting test time	T_{ts}
	Ending test time	T_{te}
	Initial system bias calibration response time	T_{ci}
	Final system bias calibration response time	T_{cf}
	Mid-point of test time or gas sampling interval to be analyzed	T_x
	Approximate upscale response at mid-point test time	S_x
	Approximate zero/low response at mid-point test time	Z_x

Notes or exceptions:
TGOC is first recorded on a wet basis, then corrected to a dry basis
The TGOC instruments used by Horizon have some historic data on instrument response to different hydrocarbons. For propane the response is 1 to 1 molecule while methane is 1.037 to 1 molecule. We correct for the instrument's "over response" to methane.

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QA/QC DOCUMENTATION

Introduction The QA procedures outlined in the U. S. Environmental Protection Agency (EPA) test methods are followed, including procedures, equipment specifications, calibrations, sample extraction and handling, calculations, and performance tolerances. Many of the checks performed have been cited in the Sampling section of the report text. The results of those checks are on the applicable field data sheets in the Appendix.

Continuous Analyzer Methods Field crews operate the continuous analyzers according to the test method requirements, and Horizon's additional specifications. On site quality control procedures include:

- calibrations with EPA Protocol 1 gases or NIST traceable gases
- pre-test zero and span checks and linearity test
- bias checks (introducing calibration gas as near to the probe tip as possible)
- calibration error (linearity) checks if any analyzer adjustments are made
- leak checks on the gas sampling system
- correction of problems that show up as the results of checks
- strip chart recordings for backup to the electronic data acquisition system

Manual Equipment QC Procedures On site quality control procedures include pre- and post-test leak checks on trains and pitot systems. If pre-test checks indicate problems, the system is fixed and rechecked before starting testing. If post-test leak checks are not acceptable, the test run is voided and the run is repeated. Thermocouples and readouts are verified in the field to read ambient prior to the start of any heating or cooling devices. Nozzles are checked for nicks or dents and are measured on three diameters twice each year.

Sample Handling Samples taken during testing are handled to prevent contamination from other runs and ambient conditions. Sample containers are glass, Teflon™, or polystyrene (filter petri dishes) and are pre-cleaned by the laboratory and in the Horizon Engineering shop. Sample levels are marked on containers and are verified by the laboratory. All particulate sample containers are kept upright and are delivered to the laboratory by Horizon personnel.

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Data Processing Personnel performing data processing double-check that data entry and calculations are correct. Results include corrections for field blanks and analyzer drift. Any abnormal values are verified with testing personnel and the laboratory, if necessary.

After results are obtained, the data processing supervisor validates the data with the following actions:

- verify data entry
- check for variability within replicate runs
- account for variability that is not within performance goals (check the method, testing, and operation of the plant)
- verify field quality checks

Equipment Calibrations Periodic calibrations are performed on each piece of measurement equipment according to manufacturers' specifications and applicable test method requirements. The Oregon Department of Environmental Quality (ODEQ) Source Testing Calibration Requirements sheet is used as a guideline. Calibrations are performed using primary standard references and calibration curves where applicable.

Thermocouples Thermocouples are calibration checked against an NIST traceable thermocouple and indicator system every six months at three points. Thermocouple indicators and temperature controllers are checked using a NIST traceable signal generator. Readouts are checked over their usable range and are adjusted if necessary (which is very unusual).

Pitots Every six months, S-type pitots are checked for misalignment, angles, lengths, and proximity to thermocouples. They are then calibrated in a wind tunnel at four points against a standard pitot using inclined manometers. They are examined for dents or distortion before each test. Pitots are protected with covers during storage and handling until they are ready to be inserted in the sample ports.

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Dry Gas Meters Dry gas meters used in the manual sampling trains are calibrated at five rates using a standard dry gas meter that is never taken into the field. The standard meter is calibration verified by the Northwest Natural Gas meter shop once every year. Dry gas meters are post-test calibrated with documentation provided in test reports.

High Volume Sampler Orifice The orifice for the High Volume sampler is calibrated annually against a positive displacement (Roots type) flow meter, two or more trials at six flow rates. The Roots meter came with a manufacturer's calibration curve and has been calibration checked by the Northwest Natural Gas meter shop.

GASES

RATA NOx PPMV & Flow Rate

Client	Wacker Siltronics		04-Jun-99	Date
Source	NOx scrubber		rata2	File
NOx		**ALL DATA**		
PPMV	Wacker Siltronics	Horizon	di	di2
Run	**CEM**	**RM**		
1	**18.92**	**19.49**	0.57	0.32
2	**24.71**	**24.79**	0.08	0.01
3	**25.42**	**24.87**	-0.55	0.30
4	**24.50**	**23.00**	-1.50	2.25
5	**23.46**	**21.52**	-1.94	3.76
6	**6.71**	**6.17**	-0.54	0.29
8	**6.42**	**6.32**	-0.10	0.01
9	**21.67**	**19.82**	-1.85	3.41
10	**23.79**	**22.29**	-1.50	2.26
Mean	19.51	18.70	-7.32	12.60

avg (di)	=	**-0.81**	
sum (di)	=	-7.32	
n-1	=	8.00	
n	=	9.00	Passing
t0.975	=	2.31	Criteria
sum (di ^2)	=	12.60	
(sum di)^2	=	53.58	
Sd^2	=	0.83	
Sd	=	0.91	
CC	=	0.70	
RA	=	**8.10**	**< 20**

FLOW				
dscf/min		Horizon	di	di2
Run	**CEM**	**RM**		
1	**11,284**	**11,306**	22.10	488
2	**11,357**	**11,311**	-45.57	2,077
3	**11,370**	**10,984**	-385.88	148,901
4	**11,277**	**11,253**	-23.95	573
5	**11,369**	**11,347**	-22.15	491
6	**11,386**	**11,139**	-246.71	60,864
8	**11,424**	**11,332**	-92.11	8,485
9	**11,407**	**11,009**	-398.02	158,423
10	**11,453**	**11,315**	-138.12	19,078
Mean	11,370	11,222	-1330.41	399,381

avg (di)	=	**-147.82**	
sum (di)	=	-1330.41	
n-1	=	8.00	
n	=	9.00	Passing
t0.975	=	2.31	Criteria
sum (di ^2)	=	399,381	
(sum di)^2	=	1,770,000	
Sd^2	=	25,339	
Sd	=	159.18	
CC	=	122.36	
RA	=	**2.41**	**< 20**

Run 7 not used because of acid dump.

RATA NOx lbm/hr

Client	Wacker Siltronics		04-Jun-99	Date
Source	NOx scrubber		rata2	File
NOx lbm/hr		Horizon	di	di2
Run	**CEM**	**RM**		
1	**1.530**	**1.579**	0.049	0.002
2	**2.010**	**2.009**	-0.001	0.000
3	**2.070**	**1.957**	-0.113	0.013
4	**1.979**	**1.854**	-0.125	0.016
5	**1.911**	**1.749**	-0.161	0.026
6	**0.547**	**0.492**	-0.055	0.003
8	**0.525**	**0.513**	-0.012	0.000
9	**1.771**	**1.563**	-0.207	0.043
10	**1.952**	**1.807**	-0.145	0.021
Mean	1.590	1.500	-0.772	0.124

avg (di)	=	**-0.086**	
sum (di)	=	-0.772	
n-1	=	8.000	
n	=	9.000	Passing
t0.975	=	2.306	Criteria
sum (di ^2)	=	0.124	
(sum di)^2	=	0.596	
Sd^2	=	0.007	
Sd	=	0.085	
CC	=	0.065	
RA	=	**10.080**	

Run 7 not used because of acid dump.

timestamp	AIT_38_027_NO	FT_38_028_VA	TT_38_026_VAL0
6/4/99 11:01:00 AM	16	11348	
6/4/99 11:02:00 AM	14	11412	
6/4/99 11:03:00 AM	17	11454	
6/4/99 11:04:00 AM	17	11369	
6/4/99 11:04:59 AM	17	11348	
6/4/99 11:05:00 AM	17	11348	
6/4/99 11:06:00 AM	25	11540	
6/4/99 11:07:00 AM	32	11348	
6/4/99 11:08:00 AM	31	11476	
6/4/99 11:09:00 AM	31	11412	
6/4/99 11:10:00 AM	27	11476	
6/4/99 11:11:00 AM	31	11412	
6/4/99 11:12:00 AM	35	11518	
6/4/99 11:13:00 AM	30	11454	
6/4/99 11:14:00 AM	23	11497	
6/4/99 11:15:00 AM	31	11476	
6/4/99 11:16:00 AM	27	11326	
6/4/99 11:16:59 AM	30	11476	
6/4/99 11:17:00 AM	30	11476	
6/4/99 11:18:00 AM	27	11241	
6/4/99 11:19:00 AM	32	11348	
6/4/99 11:20:00 AM	28	11390	
6/4/99 11:21:00 AM	30	11390	
6/4/99 11:22:00 AM	26	11476	
6/4/99 11:23:00 AM	30	11433	
6/4/99 11:24:00 AM	27	11326	
6/4/99 11:25:00 AM	32	11433	
6/4/99 11:26:00 AM	30	11390	
6/4/99 11:27:00 AM	33	11305	
6/4/99 11:27:59 AM	28	11433	
6/4/99 11:28:00 AM	28	11433	
6/4/99 11:29:00 AM	27	11390	68
6/4/99 11:30:00 AM	24	11390	68
6/4/99 11:31:00 AM	30	11604	68
6/4/99 11:32:00 AM	24	11476	68
6/4/99 11:33:00 AM	28	11433	68
6/4/99 11:34:00 AM	27	11348	68
6/4/99 11:35:00 AM	30	11433	68
6/4/99 11:36:00 AM	28	11454	68
6/4/99 11:37:00 AM	31	11433	68
6/4/99 11:38:00 AM	27	11412	68
6/4/99 11:39:00 AM	28	11348	68
6/4/99 11:40:00 AM	20	11305	68
6/4/99 11:41:00 AM	23	11284	68
6/4/99 11:42:00 AM	19	11284	68
6/4/99 11:43:00 AM	22	11198	68
6/4/99 11:44:00 AM	19	11390	68

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timestamp	AIT_38_027_NO	FT_38_028_VA	TT_38_026_VAL0
6/4/99 11:45:00 AM	23	11454	69
6/4/99 11:46:00 AM	29	11412	69
6/4/99 11:47:00 AM	30	11476	69
6/4/99 11:48:00 AM	34	11433	69
6/4/99 11:49:00 AM	37	11348	69
6/4/99 11:50:00 AM	28	11348	69
6/4/99 11:51:00 AM	18	11241	69
6/4/99 11:52:00 AM	12	11348	69
6/4/99 11:53:00 AM	14	11177	69
6/4/99 11:54:00 AM	12	11369	69
6/4/99 11:55:00 AM	15	11348	69
6/4/99 11:56:00 AM	12	11305	69
6/4/99 11:57:00 AM	25	11433	69
6/4/99 11:58:00 AM	21	11454	69
6/4/99 11:59:00 AM	23	11262	69

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timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 12:01:00 PM	0	11284	69
6/4/99 12:02:00 PM	2	11348	69
6/4/99 12:03:00 PM	2	11305	69
6/4/99 12:04:00 PM	9	11412	69
6/4/99 12:05:00 PM	18	11497	69
6/4/99 12:06:00 PM	18	11241	69
6/4/99 12:07:00 PM	18	11390	69
6/4/99 12:08:00 PM	18	11262	69
6/4/99 12:09:00 PM	18	11348	69
6/4/99 12:10:00 PM	18	11156	69
6/4/99 12:11:00 PM	18	11220	69
6/4/99 12:12:00 PM	18	11305	69
6/4/99 12:13:00 PM	18	11369	69
6/4/99 12:14:00 PM	18	11284	69
6/4/99 12:15:00 PM	18	11476	69
6/4/99 12:16:00 PM	18	11348	69
6/4/99 12:17:00 PM	18	11390	69
6/4/99 12:18:00 PM	37	11284	69
6/4/99 12:19:00 PM	35	11348	69
6/4/99 12:20:00 PM	23	11348	69
6/4/99 12:21:00 PM	22	11262	69
6/4/99 12:22:00 PM	17	11326	69
6/4/99 12:23:00 PM	19	11369	69
6/4/99 12:24:00 PM	21	11326	69
6/4/99 12:25:00 PM	28	11412	69
6/4/99 12:26:00 PM	25	11284	69
6/4/99 12:27:00 PM	24	11262	69
6/4/99 12:28:00 PM	17	11134	69
6/4/99 12:29:00 PM	20	11241	69
6/4/99 12:30:00 PM	16	11177	69
6/4/99 12:31:00 PM	19	11326	69
6/4/99 12:32:00 PM	16	11412	69
6/4/99 12:33:00 PM	19	11454	69
6/4/99 12:34:00 PM	30	11284	69
6/4/99 12:35:00 PM	30	11369	69
6/4/99 12:36:00 PM	30	11262	70
6/4/99 12:37:00 PM	22	11284	70
6/4/99 12:38:00 PM	17	11305	70
6/4/99 12:39:00 PM	19	11262	70
6/4/99 12:40:00 PM	17	11284	70
6/4/99 12:41:00 PM	19	11262	70
6/4/99 12:42:00 PM	16	11369	70
6/4/99 12:43:00 PM	25	11284	70
6/4/99 12:44:00 PM	32	11177	70
6/4/99 12:45:00 PM	28	11198	70
6/4/99 12:46:00 PM	16	11241	70
6/4/99 12:47:00 PM	14	11156	70
6/4/99 12:48:00 PM	11	11049	70
6/4/99 12:49:00 PM	13	11284	70

SCOEPA00022883

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 12:50:00 PM	12	11284	70
6/4/99 12:51:00 PM	14	11326	70
6/4/99 12:52:00 PM	13	11433	70
6/4/99 12:53:00 PM	27	11369	70
6/4/99 12:54:00 PM	24	11305	70
6/4/99 12:55:00 PM	26	11305	70
6/4/99 12:56:00 PM	15	11284	70
6/4/99 12:57:00 PM	16	11326	70
6/4/99 12:58:00 PM	14	11305	70
6/4/99 12:59:00 PM	16	11220	70
6/4/99 1:00:00 PM	14	11220	70
6/4/99 1:01:00 PM	15	11326	70
6/4/99 1:02:00 PM	28	11433	70
6/4/99 1:03:00 PM	31	11369	70
6/4/99 1:04:00 PM	29	11454	70
6/4/99 1:05:00 PM	30	11241	70
6/4/99 1:06:00 PM	28	11433	70
6/4/99 1:07:00 PM	30	11518	70
6/4/99 1:08:00 PM	28	11454	70
6/4/99 1:09:00 PM	29	11284	70
6/4/99 1:10:00 PM	28	11412	70
6/4/99 1:11:00 PM	30	11305	70
6/4/99 1:12:00 PM	28	11305	70
6/4/99 1:13:00 PM	30	11518	70
6/4/99 1:14:00 PM	28	11348	70
6/4/99 1:15:00 PM	31	11348	70
6/4/99 1:16:00 PM	28	11348	70
6/4/99 1:17:00 PM	23	11262	70
6/4/99 1:18:00 PM	16	11348	70
6/4/99 1:19:00 PM	18	11348	70
6/4/99 1:20:00 PM	17	11305	70
6/4/99 1:21:00 PM	18	11348	70
6/4/99 1:22:00 PM	18	11326	70
6/4/99 1:23:00 PM	21	11326	70
6/4/99 1:24:00 PM	20	11476	70
6/4/99 1:25:00 PM	25	11369	70
6/4/99 1:26:00 PM	23	11348	70
6/4/99 1:27:00 PM	27	11518	70
6/4/99 1:28:00 PM	27	11305	70
6/4/99 1:29:00 PM	34	11369	70
6/4/99 1:30:00 PM	25	11454	70
6/4/99 1:31:00 PM	32	11433	70
6/4/99 1:32:00 PM	34	11348	70
6/4/99 1:33:00 PM	30	11284	70
6/4/99 1:34:00 PM	23	11326	70
6/4/99 1:35:00 PM	17	11198	70
6/4/99 1:36:00 PM	17	11305	70
6/4/99 1:37:00 PM	16	11305	70
6/4/99 1:38:00 PM	15	11262	70

RUN 1

RUN 2

SCOEPA00022884

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0	
6/4/99 1:39:00 PM	17	11348	70	
6/4/99 1:40:00 PM	18	11305	70	
6/4/99 1:41:00 PM	34	11390	70	
6/4/99 1:42:00 PM	30	11262	70	
6/4/99 1:43:00 PM	29	11412	70	
6/4/99 1:44:00 PM	22	11305	70	
6/4/99 1:45:00 PM	21	11326	70	
6/4/99 1:46:00 PM	19	11326	70	
6/4/99 1:47:00 PM	22	11284	70	
6/4/99 1:48:00 PM	22	11348	70	
6/4/99 1:49:00 PM	27	11369	70	
6/4/99 1:50:00 PM	39	11433	70	
6/4/99 1:51:00 PM	41	11454	70	
6/4/99 1:52:00 PM	35	11582	70	
6/4/99 1:53:00 PM	30	11433	70	
6/4/99 1:54:00 PM	33	11305	70	
6/4/99 1:55:00 PM	36	11604	70	RUN 3
6/4/99 1:56:00 PM	32	11241	70	
6/4/99 1:57:00 PM	22	11369	70	
6/4/99 1:58:00 PM	17	11326	70	
6/4/99 1:59:00 PM	19	11433	70	
6/4/99 2:00:00 PM	15	11134	70	
6/4/99 2:01:00 PM	18	11284	70	
6/4/99 2:02:00 PM	18	11476	70	
6/4/99 2:03:00 PM	20	11476	70	
6/4/99 2:04:00 PM	23	11369	70	
6/4/99 2:05:00 PM	25	11412	70	
6/4/99 2:06:00 PM	28	11284	70	
6/4/99 2:07:00 PM	25	11262	70	
6/4/99 2:08:00 PM	23	11348	70	
6/4/99 2:09:00 PM	28	11241	70	
6/4/99 2:10:00 PM	23	11305	70	
6/4/99 2:11:00 PM	27	11348	70	
6/4/99 2:12:00 PM	25	11433	70	
6/4/99 2:13:00 PM	42	11497	71	
6/4/99 2:14:00 PM	36	11241	71	
6/4/99 2:15:00 PM	35	11220	71	
6/4/99 2:16:00 PM	22	11412	71	
6/4/99 2:17:00 PM	22	11369	71	
6/4/99 2:18:00 PM	19	11092	71	
6/4/99 2:19:00 PM	21	11262	71	
6/4/99 2:20:00 PM	20	11305	71	RUN 4
6/4/99 2:21:00 PM	30	11390	71	
6/4/99 2:22:00 PM	29	11540	71	
6/4/99 2:23:00 PM	28	11241	71	
6/4/99 2:24:00 PM	30	11134	71	
6/4/99 2:25:00 PM	25	11305	71	
6/4/99 2:26:00 PM	19	11348	71	
6/4/99 2:27:00 PM	21	11220	71	

SCOEPA00022885

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 2:28:00 PM	20	11113	71
6/4/99 2:29:00 PM	31	11220	71
6/4/99 2:30:00 PM	19	11369	71
6/4/99 2:31:00 PM	36	11305	71
6/4/99 2:32:00 PM	29	11241	71
6/4/99 2:33:00 PM	27	11198	71
6/4/99 2:34:00 PM	20	11262	71
6/4/99 2:35:00 PM	21	11326	71
6/4/99 2:36:00 PM	19	11284	71
6/4/99 2:37:00 PM	23	11198	71
6/4/99 2:38:00 PM	19	11284	71
6/4/99 2:39:00 PM	27	11369	71
6/4/99 2:40:00 PM	33	11412	71
6/4/99 2:41:00 PM	39	11284	71
6/4/99 2:42:00 PM	30	11241	71
6/4/99 2:43:00 PM	26	11262	71
6/4/99 2:44:00 PM	21	11220	71
6/4/99 2:45:00 PM	21	11305	71
6/4/99 2:46:00 PM	18	11262	71
6/4/99 2:47:00 PM	21	11156	71
6/4/99 2:48:00 PM	18	11518	71
6/4/99 2:49:00 PM	27	11390	71
6/4/99 2:50:00 PM	32	11433	71
6/4/99 2:51:00 PM	34	11348	71
6/4/99 2:52:00 PM	29	11262	71
6/4/99 2:53:00 PM	27	11518	71
6/4/99 2:54:00 PM	24	11348	71
6/4/99 2:55:00 PM	27	11390	71
6/4/99 2:56:00 PM	25	11497	71
6/4/99 2:57:00 PM	28	11326	71
6/4/99 2:58:00 PM	25	11412	71
6/4/99 2:59:00 PM	24	11348	71
6/4/99 3:00:00 PM	21	11518	71
6/4/99 3:01:00 PM	24	11454	71
6/4/99 3:02:00 PM	22	11454	71
6/4/99 3:03:00 PM	25	11348	71
6/4/99 3:04:00 PM	25	11412	71
6/4/99 3:05:00 PM	34	11348	71
6/4/99 3:06:00 PM	32	11454	71
6/4/99 3:07:00 PM	30	11369	71
6/4/99 3:08:00 PM	26	11412	71
6/4/99 3:09:00 PM	27	11305	71
6/4/99 3:10:00 PM	16	11220	71
6/4/99 3:11:00 PM	12	11305	71
6/4/99 3:12:00 PM	14	11241	71
6/4/99 3:13:00 PM	7	11262	71
6/4/99 3:14:00 PM	5	11305	71
6/4/99 3:15:00 PM	5	11262	71
6/4/99 3:16:00 PM	5	11284	71

Rw 5

SCOEPA00022886

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 3:17:00 PM	6	11156	71
6/4/99 3:18:00 PM	6	11433	71
6/4/99 3:19:00 PM	15	11497	71
6/4/99 3:20:00 PM	12	11476	71
6/4/99 3:21:00 PM	20	11433	71
6/4/99 3:22:00 PM	14	11177	71
6/4/99 3:23:00 PM	9	11284	71
6/4/99 3:24:00 PM	8	11390	71
6/4/99 3:25:00 PM	9	11454	71
6/4/99 3:26:00 PM	8	11454	71
6/4/99 3:27:00 PM	9	11561	71
6/4/99 3:28:00 PM	4	11625	71
6/4/99 3:29:00 PM	17	11518	71
6/4/99 3:30:00 PM	13	11326	71
6/4/99 3:31:00 PM	14	11241	71
6/4/99 3:32:00 PM	3	11348	71
6/4/99 3:33:00 PM	3	11326	71
6/4/99 3:34:00 PM	1	11241	71
6/4/99 3:35:00 PM	2	11198	71
6/4/99 3:36:00 PM	1	11433	71
6/4/99 3:37:00 PM	1	11646	71
6/4/99 3:38:00 PM	17	11540	71
6/4/99 3:39:00 PM	16	11497	71
6/4/99 3:40:00 PM	14	11433	71
6/4/99 3:41:00 PM	16	11305	71
6/4/99 3:42:00 PM	3	11220	71
6/4/99 3:43:00 PM	2	11305	71
6/4/99 3:44:00 PM	1	11390	71
6/4/99 3:45:00 PM	1	11390	71
6/4/99 3:46:00 PM	1	11348	71
6/4/99 3:47:00 PM	1	11476	71
6/4/99 3:48:00 PM	9	11540	71
6/4/99 3:49:00 PM	18	11476	71
6/4/99 3:50:00 PM	15	11497	71
6/4/99 3:51:00 PM	6	11305	71
6/4/99 3:52:00 PM	2	11369	71
6/4/99 3:53:00 PM	1	11412	71
6/4/99 3:54:00 PM	1	11369	71
6/4/99 3:55:00 PM	1	11305	71
6/4/99 3:56:00 PM	1	11433	71
6/4/99 3:57:00 PM	1	11390	71
6/4/99 3:58:00 PM	14	11454	71
6/4/99 3:59:00 PM	16	11412	71
6/4/99 4:00:00 PM	18	11476	71
6/4/99 4:01:00 PM	27	11454	71
6/4/99 4:02:00 PM	27	11625	71
6/4/99 4:03:00 PM	28	11646	71
6/4/99 4:04:00 PM	27	11518	72
6/4/99 4:05:00 PM	26	11305	72

Run 6

Run 7

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 4:06:00 PM	27	11497	72
6/4/99 4:07:00 PM	27	11476	72
6/4/99 4:08:00 PM	14	11540	71
6/4/99 4:09:00 PM	2	11497	71
6/4/99 4:10:00 PM	1	11497	71
6/4/99 4:11:00 PM	1	11348	71
6/4/99 4:12:00 PM	0	11412	71
6/4/99 4:13:00 PM	0	11454	71
6/4/99 4:14:00 PM	0	11454	71
6/4/99 4:15:00 PM	0	11284	71
6/4/99 4:16:00 PM	0	11390	71
6/4/99 4:17:00 PM	0	11369	71
6/4/99 4:18:00 PM	0	11262	71
6/4/99 4:19:00 PM	0	11433	71
6/4/99 4:20:00 PM	0	11518	71
6/4/99 4:21:00 PM	0	11369	71
6/4/99 4:22:00 PM	1	11198	71
6/4/99 4:23:00 PM	0	11476	71
6/4/99 4:24:00 PM	0	11348	71
6/4/99 4:25:00 PM	1	11326	71
6/4/99 4:26:00 PM	0	11476	71
6/4/99 4:27:00 PM	0	11348	71
6/4/99 4:28:00 PM	0	11326	71
6/4/99 4:29:00 PM	0	11348	71
6/4/99 4:30:00 PM	0	11284	71
6/4/99 4:31:00 PM	0	11348	71
6/4/99 4:32:00 PM	0	11390	71
6/4/99 4:33:00 PM	0	11390	71
6/4/99 4:34:00 PM	1	11476	71
6/4/99 4:35:00 PM	5	11561	71
6/4/99 4:36:00 PM	5	11518	71
6/4/99 4:37:00 PM	5	11604	71
6/4/99 4:38:00 PM	4	11454	71
6/4/99 4:39:00 PM	3	11476	71
6/4/99 4:40:00 PM	3	11497	71
6/4/99 4:41:00 PM	3	11540	71
6/4/99 4:42:00 PM	2	11326	71
6/4/99 4:43:00 PM	1	11348	71
6/4/99 4:44:00 PM	0	11284	71
6/4/99 4:45:00 PM	1	11305	71
6/4/99 4:46:00 PM	1	11348	71
6/4/99 4:47:00 PM	1	11326	71
6/4/99 4:48:00 PM	0	11390	71
6/4/99 4:49:00 PM	1	11476	71
6/4/99 4:50:00 PM	7	11518	71
6/4/99 4:51:00 PM	7	11540	71
6/4/99 4:52:00 PM	7	11540	71
6/4/99 4:53:00 PM	8	11646	71
6/4/99 4:54:00 PM	8	11433	71

Run 7

Run 8

SCOEPA00022888

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 4:55:00 PM	7	11518	71
6/4/99 4:56:00 PM	7	11412	71
6/4/99 4:57:00 PM	8	11433	71
6/4/99 4:58:00 PM	8	11305	71
6/4/99 4:59:00 PM	9	11284	71
6/4/99 5:00:00 PM	11	11369	71
6/4/99 5:01:00 PM	10	11348	71
6/4/99 5:02:00 PM	10	11454	71
6/4/99 5:03:00 PM	10	11625	71
6/4/99 5:04:00 PM	14	11518	71
6/4/99 5:05:00 PM	16	11433	71
6/4/99 5:06:00 PM	14	11348	71
6/4/99 5:07:00 PM	15	11326	71
6/4/99 5:08:00 PM	13	11540	71
6/4/99 5:09:00 PM	12	11369	71
6/4/99 5:10:00 PM	13	11284	71
6/4/99 5:11:00 PM	14	11561	71
6/4/99 5:12:00 PM	18	11497	71
6/4/99 5:13:00 PM	22	11518	71
6/4/99 5:14:00 PM	21	11412	71
6/4/99 5:15:00 PM	21	11518	71
6/4/99 5:16:00 PM	20	11390	71
6/4/99 5:17:00 PM	21	11369	71
6/4/99 5:18:00 PM	17	11220	71
6/4/99 5:19:00 PM	17	11369	71
6/4/99 5:20:00 PM	15	11433	71
6/4/99 5:21:00 PM	16	11220	71
6/4/99 5:22:00 PM	18	11476	71
6/4/99 5:23:00 PM	15	11540	71
6/4/99 5:24:00 PM	25	11476	71
6/4/99 5:25:00 PM	28	11369	71
6/4/99 5:26:00 PM	24	11198	71
6/4/99 5:27:00 PM	21	11220	71
6/4/99 5:28:00 PM	21	11348	71
6/4/99 5:29:00 PM	28	11433	71
6/4/99 5:30:00 PM	18	11476	71
6/4/99 5:31:00 PM	19	11433	71
6/4/99 5:32:00 PM	21	11433	71
6/4/99 5:33:00 PM	33	11454	71
6/4/99 5:34:00 PM	31	11454	71
6/4/99 5:35:00 PM	25	11454	71
6/4/99 5:36:00 PM	23	11561	71
6/4/99 5:37:00 PM	22	11540	71
6/4/99 5:38:00 PM	19	11433	71
6/4/99 5:39:00 PM	23	11369	71
6/4/99 5:40:00 PM	21	11348	71
6/4/99 5:41:00 PM	17	11390	71
6/4/99 5:42:00 PM	17	11348	71
6/4/99 5:43:00 PM	21	11305	71

Run 8

Run 9

SCOEPA00022889

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 5:44:00 PM	18	11518	71
6/4/99 5:45:00 PM	19	11433	71
6/4/99 5:46:00 PM	19	11433	71
6/4/99 5:47:00 PM	29	11518	71
6/4/99 5:48:00 PM	29	11540	71
6/4/99 5:49:00 PM	27	11326	71
6/4/99 5:50:00 PM	22	11412	71
6/4/99 5:51:00 PM	26	11369	71
6/4/99 5:52:00 PM	19	11476	71
6/4/99 5:53:00 PM	21	11369	71
6/4/99 5:54:00 PM	18	11262	71
6/4/99 5:55:00 PM	26	11561	71
6/4/99 5:56:00 PM	29	11582	71
6/4/99 5:57:00 PM	34	11497	71
6/4/99 5:58:00 PM	27	11369	71
6/4/99 5:59:00 PM	28	11412	71
6/4/99 6:00:00 PM	16	11433	71
6/4/99 6:01:00 PM	17	11497	71
6/4/99 6:02:00 PM	17	11348	71
6/4/99 6:03:00 PM	21	11476	71
6/4/99 6:04:00 PM	19	11561	71
6/4/99 6:05:00 PM	24	11476	71
6/4/99 6:06:00 PM	30	11454	71
6/4/99 6:07:00 PM	29	11518	71
6/4/99 6:08:00 PM	25	11561	71
6/4/99 6:09:00 PM	27	11518	71
6/4/99 6:10:00 PM	25	11582	71
6/4/99 6:11:00 PM	27	11518	71
6/4/99 6:12:00 PM	25	11604	71
6/4/99 6:13:00 PM	30	11305	71
6/4/99 6:14:00 PM	26	11198	71

RUN 10

SCOEPA00022890

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way
Portland, OR 97230
Phone (503)255-5050
Fax (503)255-0505

VOLUME FLOWRATE MEASUREMENT

Plant WACKER SILTRONIC
Sampling Location NOx OUTLET
Test Conditions NORMAL
Date 4 JUNE 1999 Time
Duct Dimensions 46.9
Duct Area 1725.7 in²
Gauge I.D. O-1K in H20 By KDT
Post Test Leak Check

Cyclonic Flow ? Yes__ No X Avg Null Angle <10°
P_o = Barometric Pressure 29.90 in Hg
C_p = Pitot Coefficient .83.505
Pitot I.D. GS-1

Run #	1	2	3	4	5	6	7	8	9	10
Time	1308	1340	1412	1445	1526	1600	1637	1708	1747	1815
Pt/ 1	.07	.07	.06	.06	.05	.07	.05	.06	.06	.07
2	.08	.08	.07	.07	.07	.08	.07	.08	.06	.08
3	.08	.08	.08	.09	.09	.09	.08	.095	.08	.09
4	.095	.08	.08	.09	.09	.09	.10	.09	.10	.10
5	.09	.09	.09	.09	.09	.09	.09	.09	.08	.08
6	.09	.09	.09	.10	.09	.10	.09	.09	.09	.10
7	.09	.085	.09	.09	.095	.095	.085	.09	.10	.09
8	.09	.08	.07	.08	.09	.08	.08	.08	.08	.08
1	.06	.07	.05	.07	.07	.05	.05	.06	.06	.07
2	.07	.07	.07	.07	.07	.06	.07	.07	.08	.07
3	.08	.09	.07	.08	.08	.07	.08	.07	.07	.07
4	.08	.08	.08	.07	.08	.09	.09	.08	.07	.08
5	.08	.09	.08	.08	.09	.07	.08	.09	.07	.08
6	.095	.10	.09	.09	.10	.09	.10	.10	.09	.095
7	.10	.08	.095	.10	.095	.09	.10	.10	.10	.09
8	.08	.09	.09	.09	.09	.08	.095	.095	.08	.08
DRY	67.4°	67.8°	67.8°	68.6°	67.8°	68.6°	66°	69.8°	66.6	65.8
WET	67.4°	65.4°	65.6°	67.0°	66.0°	66.4°	66°	66.2°	65.6	65.8°
Avg $\sqrt{\Delta P}$	.28774	.28741	.27915	.28651	.28848	.28345	.28476	.28853		
Qs	11,344	11,349	11021	11294	11,377	11,177	11,224	11,383		

Symbol	Definition, Units	Method/Equation	Run 1	Run 2	Run 3	Average
T_{db}	Dry bulb temp., °F		67.4			
T_{wb}	Wet bulb temp., °F		67.4°			
P_{stat}	Static press., in H_2O		-0.06			
T_s	Duct temp., °R	T_{db} + 460				
P_s	Duct press., in H_g	$P_o \pm$ Pstat/13.6				
S		Avg $\sqrt{\Delta P}$ x $\sqrt{T_s}$				
mv	% H_2O in gas stream	Psychrometry				
md	Mole fraction dry gas	1.00 - mv/100				
Md	Molecular weight of dry gas	Gas analysis				
Ms	Molecular wt of act. gas	Ms = mdMd + 18 (1-md)				
Vs	Velocity, fpm	Vs = 5125s (1/PsMs)$^{1/2}$ (Cp)	965	964	987	9624
qa	Actual flowrate, acfm	qa = VsAs/144	11,571	11,657	11,225	11,533
qs	Flowrate @ std cond, scfm	qs = 0.123 VsAs md Ps / Ts	11,344	11,349	11,021	11,291

SCOEPA00022891

Q1 ↓ ↓STACK TEMP

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 12:01:00 PM	0	11284	69
6/4/99 12:02:00 PM	2	11348	69
6/4/99 12:03:00 PM	2	11305	69
6/4/99 12:04:00 PM	9	11412	69
6/4/99 12:05:00 PM	18	11497	69
6/4/99 12:06:00 PM	18	11241	69
6/4/99 12:07:00 PM	18	11390	69
6/4/99 12:08:00 PM	18	11262	69
6/4/99 12:09:00 PM	18	11348	69
6/4/99 12:10:00 PM	18	11156	69
6/4/99 12:11:00 PM	18	11220	69
6/4/99 12:12:00 PM	18	11305	69
6/4/99 12:13:00 PM	18	11369	69
6/4/99 12:14:00 PM	18	11284	69
6/4/99 12:15:00 PM	18	11476	69
6/4/99 12:16:00 PM	18	11348	69
6/4/99 12:17:00 PM	18	11390	69
6/4/99 12:18:00 PM	37	11284	69
6/4/99 12:19:00 PM	35	11348	69
6/4/99 12:20:00 PM	23	11348	69
6/4/99 12:21:00 PM	22	11262	69
6/4/99 12:22:00 PM	17	11326	69
6/4/99 12:23:00 PM	19	11369	69
6/4/99 12:24:00 PM	21	11326	69
6/4/99 12:25:00 PM	28	11412	69
6/4/99 12:26:00 PM	25	11284	69
6/4/99 12:27:00 PM	24	11262	69
6/4/99 12:28:00 PM	17	11134	69
6/4/99 12:29:00 PM	20	11241	69
6/4/99 12:30:00 PM	16	11177	69
6/4/99 12:31:00 PM	19	11326	69
6/4/99 12:32:00 PM	16	11412	69
6/4/99 12:33:00 PM	19	11454	69
6/4/99 12:34:00 PM	30	11284	69
6/4/99 12:35:00 PM	30	11369	69
6/4/99 12:36:00 PM	30	11262	70
6/4/99 12:37:00 PM	22	11284	70
6/4/99 12:38:00 PM	17	11305	70
6/4/99 12:39:00 PM	19	11262	70
6/4/99 12:40:00 PM	17	11284	70
6/4/99 12:41:00 PM	19	11262	70
6/4/99 12:42:00 PM	16	11369	70
6/4/99 12:43:00 PM	25	11284	70
6/4/99 12:44:00 PM	32	11177	70
6/4/99 12:45:00 PM	28	11198	70
6/4/99 12:46:00 PM	16	11241	70
6/4/99 12:47:00 PM	14	11156	70

SCOEPA00022892

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 12:48:00 PM	11	11049	70
6/4/99 12:49:00 PM	13	11284	70
6/4/99 12:50:00 PM	12	11284	70
6/4/99 12:51:00 PM	14	11326	70
6/4/99 12:52:00 PM	13	11433	70
6/4/99 12:53:00 PM	27	11369	70
6/4/99 12:54:00 PM	24	11305	70
6/4/99 12:55:00 PM	26	11305	70
6/4/99 12:56:00 PM	15	11284	70
6/4/99 12:57:00 PM	16	11326	70
6/4/99 12:58:00 PM	14	11305	70
6/4/99 12:59:00 PM	16	11220	70
6/4/99 1:00:00 PM	14	11220	70
6/4/99 1:01:00 PM	15	11326	70
6/4/99 1:02:00 PM	28	11433	70
6/4/99 1:03:00 PM	31	11369	70
6/4/99 1:04:00 PM	29	11454	70
6/4/99 1:05:00 PM	30	11241	70
6/4/99 1:06:00 PM	28	11433	70
6/4/99 1:07:00 PM	30	11518	70
6/4/99 1:08:00 PM	28	11454	70
6/4/99 1:09:00 PM	29	11284	70
6/4/99 1:10:00 PM	28	11412	70
6/4/99 1:11:00 PM	30	11305	70
6/4/99 1:12:00 PM	28	11305	70
6/4/99 1:13:00 PM	30	11518	70
6/4/99 1:14:00 PM	28	11348	70
6/4/99 1:15:00 PM	31	11348	70
6/4/99 1:16:00 PM	28	11348	70
6/4/99 1:17:00 PM	23	11262	70
6/4/99 1:18:00 PM	16	11348	70
6/4/99 1:19:00 PM	18	11348	70
6/4/99 1:20:00 PM	17	11305	70
6/4/99 1:21:00 PM	18	11348	70
6/4/99 1:22:00 PM	18	11326	70
6/4/99 1:23:00 PM	21	11326	70
6/4/99 1:24:00 PM	20	11476	70
6/4/99 1:25:00 PM	25	11369	70
6/4/99 1:26:00 PM	23	11348	70
6/4/99 1:27:00 PM	27	11518	70
6/4/99 1:28:00 PM	27	11305	70
6/4/99 1:29:00 PM	34	11369	70
6/4/99 1:30:00 PM	25	11454	70
6/4/99 1:31:00 PM	32	11433	70
6/4/99 1:32:00 PM	34	11348	70
6/4/99 1:33:00 PM	30	11284	70
6/4/99 1:34:00 PM	23	11326	70

SCOEPA00022893

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 1:35:00 PM	17	11198	70
6/4/99 1:36:00 PM	17	11305	70
6/4/99 1:37:00 PM	16	11305	70
6/4/99 1:38:00 PM	15	11262	70
6/4/99 1:39:00 PM	17	11348	70
6/4/99 1:40:00 PM	18	11305	70
6/4/99 1:41:00 PM	34	11390	70
6/4/99 1:42:00 PM	30	11262	70
6/4/99 1:43:00 PM	29	11412	70
6/4/99 1:44:00 PM	22	11305	70
6/4/99 1:45:00 PM	21	11326	70
6/4/99 1:46:00 PM	19	11326	70
6/4/99 1:47:00 PM	22	11284	70
6/4/99 1:48:00 PM	22	11348	70
6/4/99 1:49:00 PM	27	11369	70
6/4/99 1:50:00 PM	39	11433	70
6/4/99 1:51:00 PM	41	11454	70
6/4/99 1:52:00 PM	35	11582	70
6/4/99 1:53:00 PM	30	11433	70
6/4/99 1:54:00 PM	33	11305	70
6/4/99 1:55:00 PM	36	11604	70
6/4/99 1:56:00 PM	32	11241	70
6/4/99 1:57:00 PM	22	11369	70
6/4/99 1:58:00 PM	17	11326	70
6/4/99 1:59:00 PM	19	11433	70
6/4/99 2:00:00 PM	15	11134	70
6/4/99 2:01:00 PM	18	11284	70
6/4/99 2:02:00 PM	18	11476	70
6/4/99 2:03:00 PM	20	11476	70
6/4/99 2:04:00 PM	23	11369	70
6/4/99 2:05:00 PM	25	11412	70
6/4/99 2:06:00 PM	28	11284	70
6/4/99 2:07:00 PM	25	11262	70
6/4/99 2:08:00 PM	23	11348	70
6/4/99 2:09:00 PM	28	11241	70
6/4/99 2:10:00 PM	23	11305	70
6/4/99 2:11:00 PM	27	11348	70
6/4/99 2:12:00 PM	25	11433	70
6/4/99 2:13:00 PM	42	11497	71
6/4/99 2:14:00 PM	36	11241	71
6/4/99 2:15:00 PM	35	11220	71
6/4/99 2:16:00 PM	22	11412	71
6/4/99 2:17:00 PM	22	11369	71
6/4/99 2:18:00 PM	19	11092	71
6/4/99 2:19:00 PM	21	11262	71
6/4/99 2:20:00 PM	20	11305	71
6/4/99 2:21:00 PM	30	11390	71

SCOEPA00022894

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 2:22:00 PM	29	11540	71
6/4/99 2:23:00 PM	28	11241	71
6/4/99 2:24:00 PM	30	11134	71
6/4/99 2:25:00 PM	25	11305	71
6/4/99 2:26:00 PM	19	11348	71
6/4/99 2:27:00 PM	21	11220	71
6/4/99 2:28:00 PM	20	11113	71
6/4/99 2:29:00 PM	31	11220	71
6/4/99 2:30:00 PM	19	11369	71
6/4/99 2:31:00 PM	36	11305	71
6/4/99 2:32:00 PM	29	11241	71
6/4/99 2:33:00 PM	27	11198	71
6/4/99 2:34:00 PM	20	11262	71
6/4/99 2:35:00 PM	21	11326	71
6/4/99 2:36:00 PM	19	11284	71
6/4/99 2:37:00 PM	23	11198	71
6/4/99 2:38:00 PM	19	11284	71
6/4/99 2:39:00 PM	27	11369	71
6/4/99 2:40:00 PM	33	11412	71
6/4/99 2:41:00 PM	39	11284	71
6/4/99 2:42:00 PM	30	11241	71
6/4/99 2:43:00 PM	26	11262	71
6/4/99 2:44:00 PM	21	11220	71
6/4/99 2:45:00 PM	21	11305	71
6/4/99 2:46:00 PM	18	11262	71
6/4/99 2:47:00 PM	21	11156	71
6/4/99 2:48:00 PM	18	11518	71
6/4/99 2:49:00 PM	27	11390	71
6/4/99 2:50:00 PM	32	11433	71
6/4/99 2:51:00 PM	34	11348	71
6/4/99 2:52:00 PM	29	11262	71
6/4/99 2:53:00 PM	27	11518	71
6/4/99 2:54:00 PM	24	11348	71
6/4/99 2:55:00 PM	27	11390	71
6/4/99 2:56:00 PM	25	11497	71
6/4/99 2:57:00 PM	28	11326	71
6/4/99 2:58:00 PM	25	11412	71
6/4/99 2:59:00 PM	24	11348	71
6/4/99 3:00:00 PM	21	11518	71
6/4/99 3:01:00 PM	24	11454	71
6/4/99 3:02:00 PM	22	11454	71
6/4/99 3:03:00 PM	25	11348	71
6/4/99 3:04:00 PM	25	11412	71
6/4/99 3:05:00 PM	34	11348	71
6/4/99 3:06:00 PM	32	11454	71
6/4/99 3:07:00 PM	30	11369	71
6/4/99 3:08:00 PM	26	11412	71

SCOEPA00022895

timestamp	AIT_38_027_NOX_PPM_VAL0	FT_38_028_VAL0	TT_38_026_VAL0
6/4/99 3:09:00 PM	27	11305	71
6/4/99 3:10:00 PM	16	11220	71
6/4/99 3:11:00 PM	12	11305	71
6/4/99 3:12:00 PM	14	11241	71
6/4/99 3:13:00 PM	7	11262	71
6/4/99 3:14:00 PM	5	11305	71
6/4/99 3:15:00 PM	5	11262	71
6/4/99 3:16:00 PM	5	11284	71
6/4/99 3:17:00 PM	6	11156	71
6/4/99 3:18:00 PM	6	11433	71
6/4/99 3:19:00 PM	15	11497	71
6/4/99 3:20:00 PM	12	11476	71
6/4/99 3:21:00 PM	20	11433	71
6/4/99 3:22:00 PM	14	11177	71
6/4/99 3:23:00 PM	9	11284	71
6/4/99 3:24:00 PM	8	11390	71
6/4/99 3:25:00 PM	9	11454	71
6/4/99 3:26:00 PM	8	11454	71
6/4/99 3:27:00 PM	9	11561	71
6/4/99 3:28:00 PM	4	11625	71
6/4/99 3:29:00 PM	17	11518	71

SCOEPA00022896

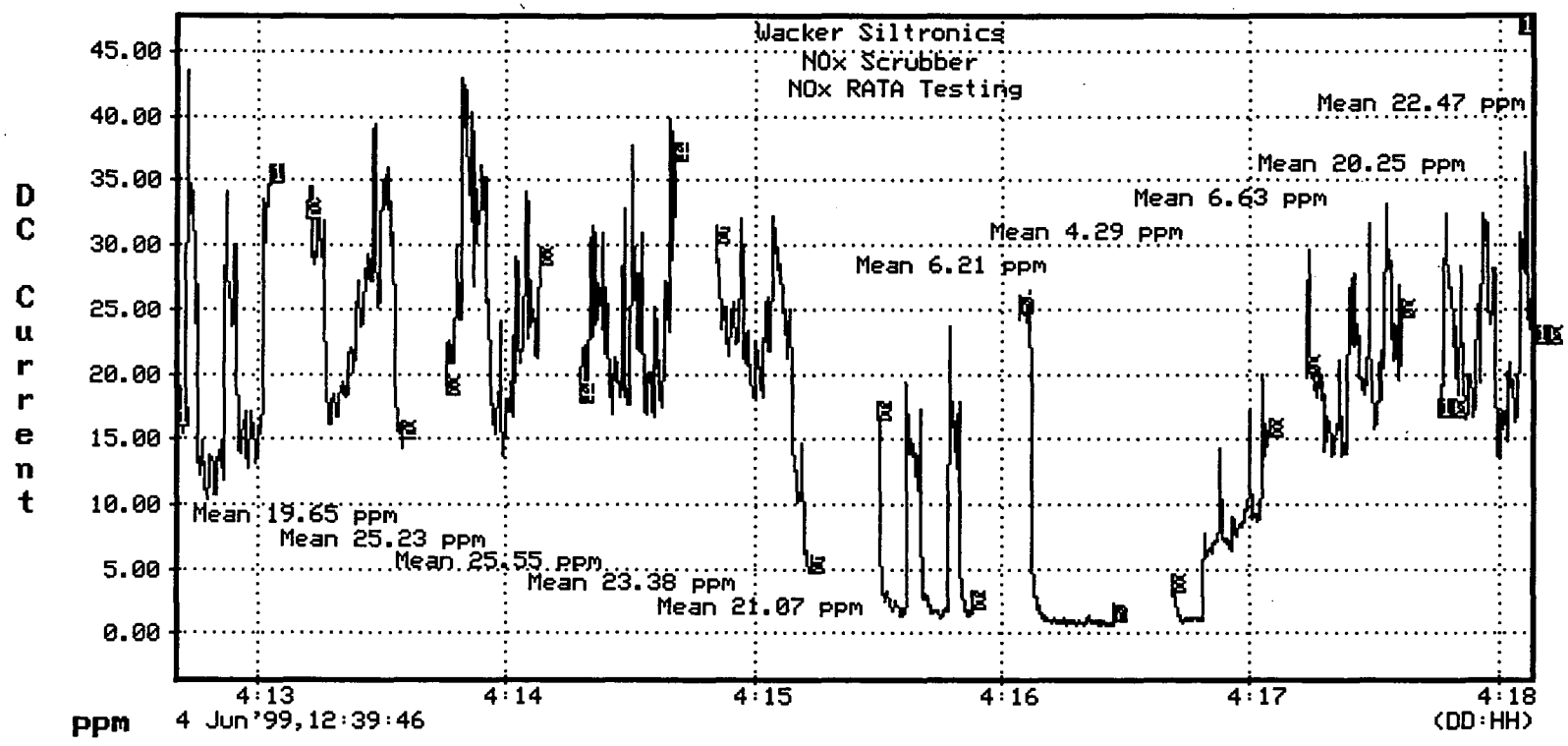
Client Data Averages

Client Wacker Siltronics
Source NOx scrubber

06/04/99
rata2

1	18.92	11,284	70.0	2	24.71	11,357	70.0	3	25.42	11,370	70.0	4	24.50	11,277	71.0	5	23.46	11,369	71.0
12:38	17	11,305	70	13:12	28	11305	70	13:45	21	11326	70	14:17	22	11369	71	14:51	34	11348	71
12:39	19	11,262	70	13:13	30	11518	70	13:46	19	11326	70	14:18	19	11092	71	14:52	29	11262	71
12:40	17	11,284	70	13:14	28	11348	70	13:47	22	11284	70	14:19	21	11262	71	14:53	27	11518	71
12:41	19	11,262	70	13:15	31	11348	70	13:48	22	11348	70	14:20	20	11305	71	14:54	24	11348	71
12:42	16	11,369	70	13:16	28	11348	70	13:49	27	11369	70	14:21	30	11390	71	14:55	27	11390	71
12:43	25	11,284	70	13:17	23	11262	70	13:50	39	11433	70	14:22	29	11540	71	14:56	25	11497	71
12:44	32	11,177	70	13:18	16	11348	70	13:51	41	11454	70	14:23	28	11241	71	14:57	28	11326	71
12:45	28	11,198	70	13:19	18	11348	70	13:52	35	11582	70	14:24	30	11134	71	14:58	25	11412	71
12:46	16	11,241	70	13:20	17	11305	70	13:53	30	11433	70	14:25	25	11305	71	14:59	24	11348	71
12:47	14	11,156	70	13:21	18	11348	70	13:54	33	11305	70	14:26	19	11348	71	15:00	21	11518	71
12:48	11	11,049	70	13:22	18	11326	70	13:55	36	11604	70	14:27	21	11220	71	15:01	24	11454	71
12:49	13	11,284	70	13:23	21	11326	70	13:56	32	11241	70	14:28	20	11113	71	15:02	22	11454	71
12:50	12	11,284	70	13:24	20	11476	70	13:57	22	11369	70	14:29	31	11220	71	15:03	25	11348	71
12:51	14	11,326	70	13:25	25	11369	70	13:58	17	11326	70	14:30	19	11369	71	15:04	25	11412	71
12:52	13	11,433	70	13:26	23	11348	70	13:59	19	11433	70	14:31	36	11305	71	15:05	34	11348	71
12:53	27	11,369	70	13:27	27	11518	70	14:00	15	11134	70	14:32	29	11241	71	15:06	32	11454	71
12:54	24	11,305	70	13:28	27	11305	70	14:01	18	11284	70	14:33	27	11198	71	15:07	30	11369	71
12:55	26	11,305	70	13:29	34	11369	70	14:02	18	11476	70	14:34	20	11126	71	15:08	26	11412	71
12:56	15	11,284	70	13:30	25	11454	70	14:03	20	11476	70	14:35	21	11326	71	15:09	27	11305	71
12:57	16	11,326	70	13:31	32	11433	70	14:04	23	11369	70	14:36	19	11284	71	15:10	16	11220	71
12:58	14	11,305	70	13:32	34	11348	70	14:05	25	11412	70	14:37	23	11198	71	15:11	12	11305	71
12:59	16	11,220	70	13:33	30	11284	70	14:06	28	11284	70	14:38	19	11284	71	15:12	14	11241	71
13:00	14	11,220	70	13:34	23	11326	70	14:07	25	11262	70	14:39	27	11369	71	15:13	7	11262	71
13:01	15	11,326	70	13:35	17	11198	70	14:08	23	11348	70	14:40	33	11412	71	15:14	5	11305	71
13:02	28	11,433	70																
13:03	31	11,369	70																
6	6.71	11,386	71.0	7	5.29	11,408	71.2	8	6.42	11,424	71.0	9	21.67	11,407	71.0	10	23.79	11,453	71.0
15:30	13	11326	71	16:04	27	11518	72	16:42	2	11326	71	17:13	22	11518	71	17:45	19	11433	71
15:31	14	11241	71	16:05	26	11305	72	16:43	1	11348	71	17:14	21	11412	71	17:46	19	11433	71
15:32	3	11348	71	16:06	27	11497	72	16:44	0	11284	71	17:15	21	11518	71	17:47	29	11518	71
15:33	3	11326	71	16:07	27	11476	72	16:45	1	11305	71	17:16	20	11390	71	17:48	29	11540	71
15:34	1	11241	71	16:08	14	11540	71	16:46	1	11348	71	17:17	21	11369	71	17:49	27	11326	71
15:35	2	11198	71	16:09	2	11497	71	16:47	1	11326	71	17:18	17	11220	71	17:50	22	11412	71
15:36	1	11433	71	16:10	1	11497	71	16:48	0	11390	71	17:19	17	11369	71	17:51	26	11369	71
15:37	1	11646	71	16:11	1	11348	71	16:49	1	11476	71	17:20	15	11433	71	17:52	19	11476	71
15:38	17	11540	71	16:12	0	11412	71	16:50	7	11518	71	17:21	16	11220	71	17:53	21	11369	71
15:39	16	11497	71	16:13	0	11454	71	16:51	7	11540	71	17:22	18	11476	71	17:54	18	11262	71
15:40	14	11433	71	16:14	0	11454	71	16:52	7	11540	71	17:23	15	11540	71	17:55	26	11561	71
15:41	16	11305	71	16:15	0	11284	71	16:53	8	11646	71	17:24	25	11476	71	17:56	29	11582	71
15:42	3	11220	71	16:16	0	11390	71	16:54	8	11433	71	17:25	28	11369	71	17:57	34	11497	71
15:43	2	11305	71	16:17	0	11369	71	16:55	7	11518	71	17:26	24	11198	71	17:58	27	11369	71
15:44	1	11390	71	16:18	0	11262	71	16:56	7	11412	71	17:27	21	11220	71	17:59	28	11412	71
15:45	1	11390	71	16:19	0	11433	71	16:57	8	11433	71	17:28	21	11348	71	18:00	16	11433	71
15:46	1	11348	71	16:20	0	11518	71	16:58	8	11305	71	17:29	28	11433	71	18:01	17	11497	71
15:47	1	11476	71	16:21	0	11369	71	16:59	9	11284	71	17:30	18	11476	71	18:02	17	11348	71
15:48	9	11540	71	16:22	1	11198	71	17:00	11	11369	71	17:31	19	11433	71	18:03	21	11476	71
15:49	18	11476	71	16:23	0	11476	71	17:01	10	11348	71	17:32	21	11433	71	18:04	19	11561	71
15:50	15	11497	71	16:24	0	11348	71	17:02	10	11454	71	17:33	33	11454	71	18:05	24	11476	71
15:51	6	11305	71	16:25	1	11326	71	17:03	10	11625	71	17:34	31	11454	71	18:06	30	11454	71
15:52	2	11369	71	16:26	0	11476	71	17:04	14	11518	71	17:35	25	11454	71	18:07	29	11518	71
15:53	1	11412	71	16:27	0	11348	71	17:05	16	11433	71	17:36	23	11561	71	18:08	25	11561	71

SCOEPA00022897



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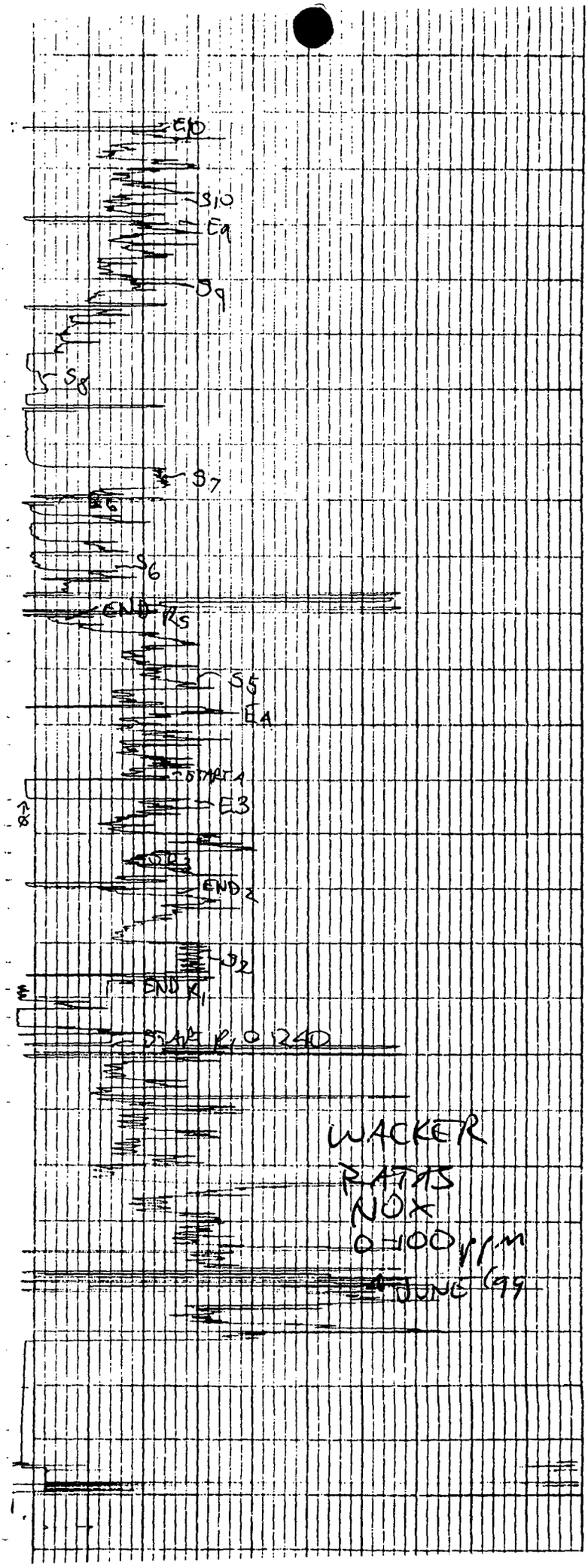


SCOEPA00022899

Relative Accuracy Field Data

Client WACKER SILTRONIC
Date 4 JUNE 1999
Observer SM/DF

Source NOx SCRUBBER
Location PORTLAND OR
Horizon Personnel KDT

Time :		1234		1237	1336	1409	1415	1443	1520	1658	1706	1738	1809					
Gas/ Range	Bottle Value	Instrument Response		Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8	Run 9	Run 10	Run 11	Run 12			Final Bias
NOx	69.1	69.1	Start	68.6	—	—	—	—	67.8	—	—	—						
	25.73	25.6	Bias	25.74	25.92	26.34	26.46	25.71	25.2	25.7	25.83	26.4	26.0					
0-100	0.00	0.00		0.30	0.48	0.55	0.42	0.46	0.16	0.11	0.12	0.40	0.9					
			End						—	—			—					
			Bias	25.92	26.34	26.46	25.71	24.6	25.7	25.83	26.4	26.0	25.8					
				0.48	.55	0.42	0.46	0.20	0.11	0.12	0.40	0.4	0.30					
	Instrument Response		High						69.1									
			Mid						25.9									
			Low						0.04									
			Start															
			Bias															
0-																		
			End															
			Bias															
	Instrument Response		High															
			Mid															
			Low															
			Start	1238	1312	1345	1417	1451	1530	1604	1642	1713	1745					
			End	1303	1335	1408	1440	1514	1553	27	1705	1736	1808					

Notes: FABS 1+2 DOWN TO DUMP ACID DURING RUN #7 - DO NOT USE THIS RUN -

FABS DOWN THIS RUN (ACID DUMP)

Response Time ≈ 60 SECS TO 99%

PRESENT: SUSAN MULHOLLAND
DAN FULLER

SCOEPA00022900

SPOT 1 MINUTE NUMBERS

RUN #4

TIME	WACKER	HORIZON
1424	28.1	24.6
1425	24.7	18.2
1426	19:0	21.0
1427	20.8	19
1428	19:9	23.5
1429	31.1	18.3
1430	19:0	35.7
1431	35.6	25.9
1432	28.6	23.7
1433	28.7	21.0
1434	20.0	19.9
1435	21.7	17.8
	24.76	22.38

(2.37 ppm)

RUN #5

1456	WACKER	HORIZON
1457	25.2	25.5
1458	29.2	24.6
1459	24.2	23.2
1500	24.3	19.5
1501	21.2	18.6
1502	24.1	20.3
1503	21.3	21.1
1504	25.1	24.0
1505	24.7	27.6
1506	33.4	29.2
1507	32.5	27.8
1508	29.4	24.8
	26.21	23.85

(2.36)

RUN #6

TIME	WACKER	HORIZON
1533	3.2	2.3
34	1.5	2.5
35	1.9	1.8
36	1.1	1.99
37	1.4	19.1
38	17.0	14.21
39	15.8	13.9
40	14.1	11.4
41	16.0	4.5
42	2.6	2.8
43	1.9	1.6
44	1.5	1.8
45		
	(6.5)	(6.49)

RUN #7 - FAS DOWN?

TIME	WACKER	HORIZON
1610	1.3	1.3
11	0.9	1.3
12	0.7	0.91
13	0.5	1.07
14	0.4	0.95
15	0.6	0.96
16	0.5	0.9
17	0.5	0.9
18	0.6	0.8
19	0.5	0.85
20	0.4	0.9
21	0.6	1.2
22	0.8	0.8
	(0.638)	(.98768)

$\Delta = .3493$ ppm.

SCOEPA00022901

RUN	AFC
1	19.67
2	25.25
3	25.50
4	23.37
5	21.10
6	6.25
7	4.40
8	
9	
10	
11	

1130 WACKER 1 MIN	RUSTRAK AVG	10% OF STD
24.3		
29.2		
24.8		
28.5		
26.1		
30.5		
27.9		
30.7		
26.8		
27.0		

32.43 AVG

(38.6 – 22.91)

27.5F / 32.43 = 85% (

7132

SUSAN MULHOLLAND

RUN 1 –

	WACKER	HORIZON
1242 –	17.5	– 17.45
1243 –	29.5	– 32.5
1244 –	31.5	– 28.7
1245 –	26.9	– 18.72
1246 –	14.8	– 14.14
1247	11.1	– 13.43
1248 –	13.8	– 11.7
1249 –	11.5	– 13.5
1250 –	14.2	– 13.12
1251 –	12.6	– 32.9
1252 –	26.6	– 25.16
1253 –	23.6	– 26.1
1254 –	25.8	– 16.2
1255 –	14.9	– 16.13
1256 –	16.3	– 13.4

19.34 | 19.55

0.16 ppm

RUN 3

	WACKER	HORIZON
1350 –	39.9	– 42
1351 –	41.1	– 35.6
1352 –	34.4	– 32.8
1353 –	30.0	– 32.5
1354 –	32.9	– 34.9
1355 –	34.7	– 30.88
1356 –	28.3	– 22.2
1357 –	21.1	– 16.82
1358 –	16.3	– 18.25
1359 –	19.5	– 13.8
1400 –	15.2	– 17.91
1401 –	17.8	– 19.0

27.6 – 26.38

(1.21 ppm)

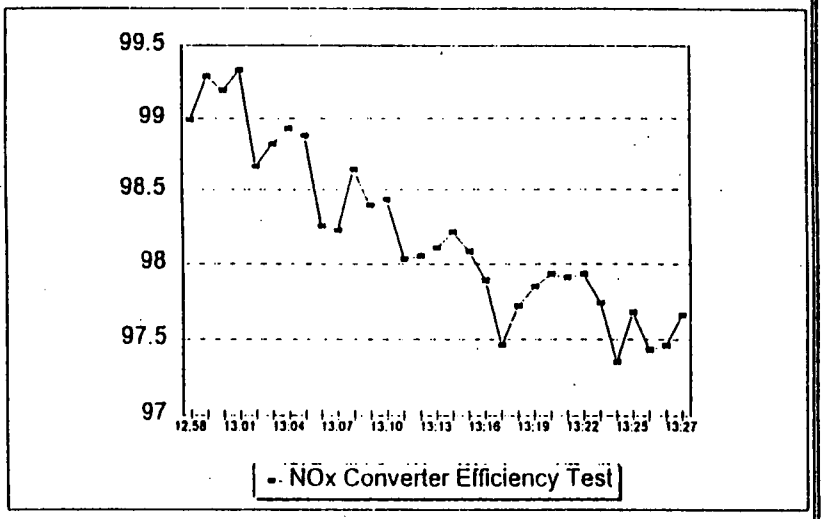
NOx Converter Efficiency Test 05/15/98

Thermo Environmental Model 10-AR #1

5/15/98

Readings	Time
98.99	12:58
99.29	12:59
99.19	13:00
99.33	13:01
98.66	13:02
98.8	13:03
98.93	13:04
98.88	13:05
98.25	13:06
98.22	13:07
98.64	13:08
98.39	13:09
98.43	13:10
98.03	13:11
98.05	13:12
98.10	13:13
98.21	13:14
98.08	13:15
97.89	13:16
97.46	13:17
97.72	13:18
97.85	13:19
97.93	13:20
97.91	13:21
97.93	13:22
97.74	13:23
97.35	13:24
97.68	13:25
97.43	13:26
97.46	13:27
97.66	13:27

	Pretest	Post test
Zero	0.00	0.44
Span	206.40	207.20
Mid	n/a	n/a
Time	12:58	13:27



Percent Loss= 1.993

PASS

SCOEPA00022904

FLOW RATES

Flow Rate Determination

Client	Wacker Siltronics	Compartment	**Run 1**	**Run 2**	**Run 3**	**Run 4**	**Run 5**	**Run 6**	**Run 7**	**Run 8**	**Run 9**	**Run 10**	**Average**
Source	NOx scrubber	Point											
Location	Portland, OR	**1**	0.070	0.070	0.060	0.060	0.050	0.070	0.050	0.060	0.060	0.070	
Date	04-Jun-99	**2**	0.080	0.080	0.070	0.070	0.070	0.080	0.070	0.080	0.060	0.080	
Testers	kdt	**3**	0.080	0.080	0.080	0.090	0.090	0.090	0.080	0.095	0.080	0.090	
File	rata2	**4**	0.095	0.080	0.080	0.090	0.090	0.090	0.100	0.090	0.100	0.100	
Analysis/QA	mew	**5**	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.080	0.080	
Equipment		**6**	0.090	0.090	0.090	0.100	0.090	0.100	0.090	0.090	0.090	0.100	
Total Runs	10	**7**	0.090	0.085	0.090	0.090	0.095	0.095	0.085	0.090	0.100	0.090	
Pts per Run	16	**8**	0.090	0.080	0.070	0.080	0.090	0.080	0.080	0.080	0.080	0.080	
		9	0.060	0.070	0.050	0.070	0.070	0.050	0.050	0.060	0.060	0.070	
		10	0.070	0.070	0.070	0.070	0.070	0.060	0.070	0.070	0.070	0.070	
		11	0.080	0.090	0.070	0.080	0.080	0.070	0.080	0.070	0.070	0.070	
		12	0.080	0.080	0.080	0.070	0.080	0.090	0.090	0.080	0.070	0.080	
		13	0.080	0.090	0.080	0.080	0.090	0.070	0.080	0.090	0.070	0.080	
		14	0.095	0.100	0.090	0.090	0.100	0.090	0.100	0.100	0.090	0.095	
		15	0.100	0.080	0.095	0.100	0.095	0.090	0.100	0.100	0.100	0.090	
		16	0.080	0.090	0.090	0.090	0.090	0.080	0.095	0.095	0.080	0.080	
All Points	SQRT(dP)		**0.2877**	**0.2874**	**0.2792**	**0.2865**	**0.2885**	**0.2835**	**0.2848**	**0.2885**	**0.2796**	**0.2873**	

Symbol	Definitions, Units	Method/Notes	**Run 1**	**Run 2**	**Run 3**	**Run 4**	**Run 5**	**Run 6**	**Run 7**	**Run 8**	**Run 9**	**Run 10**	**Average**
	Time		13:08	13:40	14:12	14:45	15:26	16:00	16:37	17:08	17:47	18:15	
Ds	Stack Diameter (if Circular)	in	46.875	46.875	46.875	46.875	46.875	46.875	46.875	46.875	46.875	46.875	
As	Cross Section	in²	1725.7	1725.7	1725.7	1725.7	1725.7	1725.7	1725.7	1725.7	1725.7	1725.7	
Cp	Pitot Coef.		0.8351	0.8351	0.8351	0.8351	0.8351	0.8351	0.8351	0.8351	0.8351	0.8351	
Ts	Duct temperature	°F	67.4	67.8	67.8	68.6	67.8	68.6	66.0	69.8	66.6	65.8	67.6
Ts	Duct temperature	°R	527.1	527.5	527.5	528.3	527.5	528.3	525.7	529.5	526.3	525.5	
Tdb	Dry Bulb Temp	°F	67.4	67.8	67.8	68.6	67.8	68.6	66.0	69.8	66.6	65.8	67.6
Twb	Wet Bulb Temp	°F	67.4	65.4	65.6	67.0	66.0	66.4	66.0	66.2	65.6	65.8	66.1
Pbar	Barometric Pressure	in Hg	29.90	29.90	29.90	29.90	29.90	29.90	29.90	29.90	29.90	29.90	
Pg	Static Pressure	in H2O	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	(0.1)
Ps	Duct Pressure	in Hg	29.90	29.90	29.90	29.90	29.90	29.90	29.90	29.90	29.90	29.90	
dp^½			0.2877	0.2874	0.2792	0.2865	0.2885	0.2835	0.2848	0.2885	0.2796	0.2873	
Bws	*Moisture, % Stack*	*Estimate*	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	
Bws	Moisture, % Stack	Psychometric	2.35	2.11	2.14	2.26	2.18	2.20	2.25	2.13	2.18	2.23	2.20
mfg	Mole fraction dry gas		97.6%	97.9%	97.9%	97.7%	97.8%	97.8%	97.8%	97.9%	97.8%	97.8%	
Md	Molecular weight Dry		28.965	28.965	28.965	28.965	28.965	28.965	28.965	28.965	28.965	28.965	
Ms	Molecular weight Wet		28.707	28.733	28.731	28.717	28.726	28.724	28.719	28.732	28.726	28.721	
vs	Velocity stack	fpm	965.9	964.7	937.0	962.7	968.4	952.3	954.4	970.3	937.4	962.5	957.6
Qa	Flowrate actual	acf/min	11,575	11,561	11,229	11,537	11,605	11,412	11,438	11,628	11,234	11,535	11,476
Qsd	Flowrate @std	dscf/min	11,306	11,311	10,984	11,253	11,347	11,139	11,214	11,332	11,009	11,315	11,221

HORIZON ENGINEERING LLC
13585 N.E. Whitaker Way
Portland, OR 97230
Phone (503)255-5050
Fax (503)255-0505

VOLUME FLOWRATE MEASUREMENT

Plant WACKER SILTRONIC
Sampling Location NOx OUTLET
Test Conditions NORMAL
Date 4 JUNE 1999 Time
Duct Dimensions 46.9
Duct Area 1725.7 in²
Gauge I.D. 0-1K in H20 By KDT
Post Test Leak Check

Cyclonic Flow ? Yes__ No X Avg Null Angle <10°
P_o = Barometric Pressure 29.90 in Hg
C_p = Pitot Coefficient .83505
Pitot I.D. GS-1

Run #	1	2	3	4	5	6	7	8	9	10
Time	1308	1340	1412	1445	1526	1600	1637	1708	1747	1815
Pt/ 1	.07	.07	.06	.06	.05	.07	.05	.06	.06	.07
2	.08	.08	.07	.07	.07	.08	.07	.08	.06	.08
3	.08	.08	.08	.09	.09	.09	.08	.095	.08	.09
4	.095	.08	.08	.09	.09	.09	.10	.09	.10	.10
5	.09	.09	.09	.09	.09	.09	.09	.09	.08	.08
6	.09	.09	.09	.10	.09	.10	.09	.09	.09	.10
7	.09	.085	.09	.09	.095	.095	.085	.09	.10	.09
8	.09	.08	.07	.08	.09	.08	.08	.08	.08	.08
1	.06	.07	.05	.07	.07	.05	.05	.06	.06	.07
2	.07	.07	.07	.07	.07	.06	.07	.07	.07	.07
3	.08	.09	.07	.08	.08	.07	.08	.07	.07	.07
4	.08	.08	.08	.07	.08	.09	.09	.08	.07	.08
5	.08	.09	.08	.08	.09	.07	.08	.09	.07	.08
6	.095	.10	.09	.09	.10	.09	.10	.10	.09	.095
7	.10	.08	.095	.10	.095	.09	.10	.10	.10	.09
8	.08	.09	.09	.09	.09	.08	.095	.095	.08	.08
DRY	67.4°	67.8°	67.8°	68.6°	67.8°	68.6°	66°	69.8°	66.6	65.8
WET	67.4°	65.4°	65.6°	67.0°	66.0°	66.4°	66°	66.2°	65.6	65.8°
Avg √ΔP	.28774	.28741	.27915	.28651	.28848	.28345	.28476	.28853		
Qs	11,344	11,349	11,021	11,294	11,377	11,177	11,224	11,383		

Symbol	Definition, Units	Method/Equation	Run 1	Run 2	Run 3	Average
T_{db}	Dry bulb temp., °F		67.4			
T_{wb}	Wet bulb temp., °F		67.4°			
P_{stat}	Static press., in H_2O		-0.06			
T_s	Duct temp., °R	T_{db} + 460				
P_s	Duct press., in H_g	$P_o \pm P_{stat}/13.6$				
S		Avg $\sqrt{\Delta P}$ x $\sqrt{T_s}$				
mv	% H_2O in gas stream	Psychrometry				
md	Mole fraction dry gas	1.00 - mv/100				
Md	Molecular weight of dry gas	Gas analysis				
Ms	Molecular wt of act. gas	Ms = mdMd + 18 (1-md)				
Vs	Velocity, fpm	Vs = 5125s $(1/P_sM_s)^{1/2}$ (Cp)	965	964	987	9624
qa	Actual flowrate, acfm	qa = VsAs/144	11,571	11,557	11,225	11,533
qs	Flowrate @ std cond, scfm	qs = 0.123 VsAs md Ps / Ts	11,344	11,349	11,021	11,291

CALIBRATION GAS CERTIFICATES

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (909) 653-6780 • FAX (909) 653-2430

PO 2183
of 7/14/98
#N7

REPORT OF ANALYSIS
NIST TRACEABLE GAS MIXTURES

HENG01

TO:
DAVID ROSSMAN
HORIZON ENG'G/INFRARED NW
13585 NE WHITAKERWAY
PORTLAND, OR 97230-

DATE: 08/18/98

CUSTOMER ORDER NUMBER: 002183

CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
CA03076	Nitric oxide	25.73 ± 0.26 ppm	SRM 2629a
	Nitrogen,O2-Free	Balance	
	NOx	25.73 ppm	

ppm = umole/mole % = mole-%

The above analysis is traceable to the National Institute of Standards and Technology by intercomparison with the reference standard listed above.
Where indicated, volumetric and gravimetric reference standards are traceable thru use of our analytical balance, NIST Weight Report No. MMAP 232.09/202491.

Analyst: Steve Kozy
S.B. Kozy

Approved:
J.T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.

SCOEPA00022909

00202
#~~KB~~
OK
03-09-98

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (909) 653-6780 • FAX (909) 653-2430

REPORT OF ANALYSIS
EPA PROTOCOL GAS MIXTURES

HENG01

TO:

DAVID ROSSMAN
HORIZON ENG'G-INFRARED NW
13585 NE WHITAKER WAY
PORTLAND, OR 97230-

DATE : 02/27/98

CUSTOMER ORDER NUMBER: 002021

PAGE 1

COMPONENT	CONCENTRATION(v/v) +/-EPA UNCERTAINTY	REFERENCE STANDARD	ANALYZER MAKE,MODEL,S/N,DETECTION	EXPIRATION DATE	REPLICATE ANALYSIS DATA	
CYLINDER NO.:	CC53877					
			Monitor Labs Model 8440		02/17/98	02/26/98
Nitric oxide	✓69.1 ±.4 ppm	GMIS	S/N 136	02/26/00	69.0 ppm	69.1 ppm
NOx	69.1 ppm	Cylinder #	Continuous		68.9 ppm	68.8 ppm
Nitrogen,O2-Free Balance		CC117928	Chemiluminescence		69.0 ppm	69.3 ppm
Cylinder Pressure: 2000 psig		@ 101.6 ppm	Last Cal Date: 02/10/98	Mean:	69.0 ppm	69.1 ppm

ppm = umole/mole % = mole-%

The above analyses were performed in accordance with Procedure G1 of the EPA Traceability Protocol, Report Number EPA-600/R93/224, dated September, 1993.

This cylinder should not be used if the pressure is less than 150 psig.

Analyst: B.E. Gross

Approved: J.T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.

STANDARD CALIBRATION GASES IN ALUMINUM CYLINDERS

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

2 March, 1999

Susan Mulholland
Wacker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Ms. Mulholland:

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on March 2, 1999. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria for ± 5 ppm (5% of instrument scale). The system is therefore in compliance with respect to the method criteria. The accuracy of the NO CEM was calculated to be 5.2% and 0.4% for audit points 1 and 2 respectively. The accuracy of the NO_x CEM was calculated to be 4.6% and 0.4% respectively. This leaves both instruments reading slightly high at the mid-range values. PPM differences of the NO CEM were calculated to be 1.3 ppm and 0.2 ppm respectively. PPM differences of the NOx CEM were calculated to be 1.2 ppm and 0.2 ppm respectively. This easily meets the criteria of ± 5ppm specified by the method.

SCOEPA00022911

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F.

For the CGA, each monitor (NO and NO_x) was challenged three times with three independent audit standards: a zero standard of purified air, and two NIST traceable cylinders of NO gas at concentrations equal to 26% and 55% of the instrument span. The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

If you have any questions, please contact us.

Sincerely,

HORIZON ENGINEERING

Kurt D. Torgerson

attachments: Cylinder Audit Report
Calibration Gas Certificates

SCOEPA00022912

Cylinder Gas Audit Results

Client	Wacker Siltronics	Period Ending Date	31 March 1999
Plant name	Wacker Siltronics, Portland, OR		
Source Unit No.	NOx scrubbing system outlet	Date of Audit	2 March 1999
Audited by	Kurt D. Torgerson		

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero air	Audit Point 1	Audit Point 2	
Cylinder ID No.		CC15827	XCOO6159B	XCOO6129B	
Date of Certification			05/13/97	05/03/96	
Type of Certification			NIST-SRM	NIST-SRM	
Certified Audit Value (NO)			25.21	55.3	
Certified Audit Value (NOx)			25.21	55.3	
% of Span Value			25%	55%	

CEMS Response Time	55 seconds				
Sampled for 2x response time, +					
CEMS Response Value	NO Analyzer / Model # CFA-311A Mfg# 568833012				**Time**
Run 1		-0.20	26.50	55.50	0942/0944/0949
Run 2		0.40	26.70	55.50	0952/0954/0957
Run 3		0.20	26.40	55.60	0959/1002/1005
Average		0.13	26.53	55.53	
Accuracy, % difference			5.2%	0.4%	
Accuracy, difference, ppm			1.3	0.2	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	+/- 5	+/- 5

CEMS Response Value	NOx Analyzer / Model # CFA-311A Mfg# 568833011				**Time**
Run 1		-0.80	26.10	55.10	0943/0946/0951
Run 2		0.10	26.30	55.30	0953/0955/0957
Run 3		-0.10	26.70	56.10	1000/1004/1007
Average		-0.27	26.37	55.50	
Accuracy, % difference			4.6%	0.4%	
Accuracy, difference, ppm			1.2	0.2	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	+/- 5	+/- 5

Comments

Heated Line Temp - 196 degrees F

Confirm Logbook Entry YES

SCOEPA00022913

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (909) 653-6780 • FAX (909) 653-2430

#N3 OK

REPORT OF ANALYSIS
NIST TRACEABLE GAS MIXTURES

HENG01

TO:
DAVID ROSSMAN
HORIZON ENG'G/INFRARED NW
13585 NE WHITAKER WAY
PORTLAND, OR 97230-

DATE: 06/02/97

CUSTOMER ORDER NUMBER: 00185

CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
XC00061598	Nitric oxide	25.21 ± 0.25 ppm	SRM 1683b
	Nitrogen,O2-Free	Balance	
	NOx	25.21 ppm	

ppm = umole/mole % = mole-%

The above analysis is traceable to the National Institute of Standards and Technology by intercomparison with the reference standard listed above.
Where indicated, volumetric and gravimetric reference standards are traceable thru use of our analytical balance, NIST Weight Report No. MMAP 232.09/202491.

Analyst: B.E. Gross

Approved: J.T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.

SCOEPA00022914

#N2 0

BOC GASES

4715 N.E. 78th Street
Vancouver, WA 98665
Telephone: 360 695 1267
503-283-2561
FAX 360-698-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5479
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted. 55 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC006129B Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	55 ppm	55.3 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By [signature]
Authorized Signature

Check for OFF SPEC result.

WHITE - Customer Copy

SCOEPA00022915

Pounds VOCs Evaporated or In Wastes (1999)														
Part no SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly total
5406902	Spraypaint *	0.00	5.95	17.85	33.32	23.80	9.52	20.23	9.52	7.14	4.76	5.95	0.00	138.04
5407103	Sealant Silicone White 10.3 OZ tube	0.00	0.03	0.00	0.00	0.00	0.00	0.05	0.03	0.00	0.00	0.03	0.00	0.14
5407104	Sealant Rubber Silicone RTV GE #W102 cart	0.00	0.00	0.03	0.13	0.03	0.21	0.00	0.05	0.36	0.00	0.00	0.15	0.95
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	0.26	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.17	0.00	0.00	0.09	0.69
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	0.26	0.00	0.00	0.09	0.22	0.13	0.09	0.04	0.00	0.00	0.00	0.09	0.91
5407328	Cleaner Instant Contact #CRC-02016	1.47	5.89	0.00	0.00	0.00	0.00	5.89	2.95	10.31	0.00	20.62	10.31	57.45
5407330	Cleaner Dust Chaser Spray VWR# 21899-094	4.65	11.63	12.79	12.79	12.79	13.96	13.96	5.82	11.63	9.30	13.96	8.14	131.42
5407332	Cleaner Electric Motor KAR #65390-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.76
5407334	Stripper / Remover For Paint, Carbon &	1.28	0.00	3.83	3.83	2.55	0.00	2.55	5.74	0.00	0.00	2.55	0.00	22.33
5407347	Refrigerant R-22 (30 LBS)	0.00	0.00	1.91	1.28	0.00	0.00	0.64	0.64	0.00	0.64	0.64	0.64	6.38
	Safety-Kleen Premium Gold Solvent	453.70	173.47	226.85	226.85	400.32	0.00	453.70	173.47	226.85	453.70	173.47	453.70	3416.06
5407376	Isopropyl Alcohol (IPA) 99%	3982.00	3258.00	2896.00	3258.00	2534.00	5068.00	3982.00	5068.00	3258.00	2172.00	2172.00	2172.00	39820.00
5407408	Lubricant Spray Molykote 321R Dow-Corning	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407431	Lubricant CRC 3-36 #03005	1.43	0.00	1.43	0.72	0.42	0.72	0.72	0.18	0.72	1.43	0.77	0.54	9.06
5407433	Lubricant CRC 3-36 (Gallon Can)	0.48	0.00	0.95	0.00	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.95	3.34
5407435	Lube Teflon #79417	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407436	Lubricant Teflon Dry #79418	0.00	0.00	0.00	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
5407439	Cement Neoprene Turntable Covering Carbo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407466	Skyliquid Wax for Enya, HF-3511	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407470	Cleaner Zero Residue Instant Teck Spray	0.06	0.28	0.00	0.00	0.17	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.74
5407938	Caviclean #2 Cleaning Solution Turco	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407947	Lubricant Silicon	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.89
5407948	Grease Multi Purpose White	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	32.03	24.02	28.02	28.02	28.02	32.03	8.01	32.03	20.02	4.00	16.01	16.01	268.21
5407956	Hardner AD1211-B Red Pigment	3.21	2.29	3.21	1.38	0.46	1.83	0.92	1.83	2.29	0.46	1.83	1.83	21.56
5407957	Epoxy STC Fast Cure Grey	13.34	10.37	16.38	31.34	26.97	31.12	33.42	30.38	26.53	34.61	35.64	32.75	322.86
5407963	Mold-Release Wiz F-57NC 1 Gallon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407967	Adhesive Tixo K-10 10 Gm/Each	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	1.20	0.00	0.00	3.61
5413542	Skyliquid Wax for Enya, HF-4011	327.77	181.79	289.21	380.10	388.37	392.50	392.50	420.04	385.61	327.77	608.72	454.47	4548.86
	Total Per Month:	4823.13	3673.74	3498.46	3978.47	3418.92	5551.86	4914.66	5750.95	3950.83	3009.87	3052.21	3152.44	

Total VOCs Evaporated or In Wastes (1999): 48775.53 lbs or 24.39 tons

VOCs to waste water: 14416 (voc to waste water and waste.xls - 1999)

VOCs to waste: 3742 (voc to waste water and waste.xls - 1999)

Total VOCs Evaporated (1999): 30617.12 lbs or 15.31 tons

SCOEPA00022916

Wacker Siltronic

Report ZMR00031 — Annual Chemical Usage Review — Date: 1/3/00 — Time: 15:56:42

Material Number	Stock	Material Group	Total Consumpti	Unit of Measure
5406902	1	685	9	CAN

PAINT Krylon white enamel glossy

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	4	4	0	0	1	0

5406903	12	685	30	CAN

PAINT gray primer 2X982 16 OZ.

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	2	11	3	3	3	3	2	2	1	0

5406904	6	685	13	CAN

PAINT SUPERCOAT 316L SS AEROSOL CAN

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	6	0	0	0	7	0	0	0	0	0

5406905	5	685	0	CAN

VARNISH red insulating

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5406906	6	685	15	EA

PAINT John Deere Green

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	3	8	1	1	1	0	0	1	0

5406907	3	685	1	EA

PAINT Chevrolet Orange

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	1	0	0	0	0	0	0	0

5406908 1 685 8 EA
PAINT Ford red

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	3	3	1	1	0	0	0	0	0

5406909 6 685 13 EA
PAINT high heat black

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	2	3	3	1	0	0	0	2	2	0	0

5406910 4 685 7 EA
PAINT Chrysler blue

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	4	0	0	0	1	0	0	0	2	0

5406911 0 685 10 EA FLAGGED FOR DELETION
PAINT tan industrial enamel

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	5	3	2	0	0	0	0	0	0

5406912 2 685 10 CAN
PAINT glossy black spray can #84000

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	3	0	3	1	1	0	0	2	0	0	0

5407103 10 865 9 EA
SEALANT silicone white 10.3 OZ tube

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	2	0	0	0	0	3	2	0	0	2	0

5407104 6 865 37 EA
SEALANT rubber silicone RTV GE#W102

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	1	5	1	8	0	2	14	0	0	6

5407107 7 865 16 CAN
SILICONE RTV HIGH TEMP BLUE MAK-A-GASKET

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
6	0	0	0	4	0	0	0	4	0	0	2

5407108 24 865 21 CAN
SILICONE RTV HIGH TEMP CLEAR MAK-A-GASKE

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
6	0	0	2	5	3	2	1	0	0	0	2

5407327 0 775 0 GAL FLAGGED FOR DELETION
SPRAY CLEAN INDUSTRIAL BUTYL DE/DL 100

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407328 7 775 39 CAN
CLEANER instant contact #CRC-02016

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
1	4	0	0	0	0	4	2	7	0	14	7

5407330 27 775 113 CAN
CLEANER DUST CHASER SPRAY VWR# 21899-094

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
4	10	11	11	11	12	12	5	10	8	12	7

5407332 8 835 2 CAN
CLEANER electric motor KAR #65390-2

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	2

5407334 15 835 35 CAN
STRIPPER/REMOVER PAINT, CARBON & GASKETS

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
2	0	6	6	4	0	4	9	0	0	4	0

5407347 3 775 10 DR
REFRIGERANT R-22 (30 LBS)

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	3	2	0	0	1	1	0	1	1	1

5407356 0 705 0 CS FLAGGED FOR DELETION
STRIPPER PHOTORESIST #843987

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407374 0 835 0 DR
ETHANOL V-1 200 (VANZOL)

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407375 0 835 0 DR
ACETONE

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407376 5 835 110 DR
ISOPROPYL ALCOHOL (IPA) 99%

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
11	9	8	9	7	14	11	14	9	6	6	6

5407408 4 595 0 EA
LUBRICANT spray Molykote 321R Dow-Cornin

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407431 14 595 152 EA
LUBRICANT CRC 3-36 16oz can

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
24	0	24	12	7	12	12	3	12	24	13	9

5407433 4 595 7 GAL
LUBRICANT CRC 3-36 (1 gallon)

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
1	0	2	0	0	2	0	0	0	0	0	2

5407435 2 595 0 CAN
LUBE teflon #79417

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407436 1 595 2 CAN
LUBRICANT teflon dry #79418

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	1	1	0	0	0	0	0	0	0

5407439 0 765 0 BTL FLAGGED FOR DELETION
CEMENT NEOPRENE TURNTABLE COVERING CARBO

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407466 0 865 0 BTL FLAGGED FOR DELETION
WAX SKYLIQUID CLEAR HF3511 2 LITER

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407470 2 175 13 CAN
CLEANER zero residue instant tech spray

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
1	5	0	0	3	0	0	4	0	0	0	0

5407938 0 775 0 DR FLAGGED FOR DELETION
CAVICLEAN #2 CLEANING SOLUTION TURCO

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407947 7 595 1 CAN
LUBRICANT SILICON

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	1	0	0	0	0	0	0

5407948 9 595 0 EA
GREASE MULTI PURPOSE WHITE

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407955 25 765 67 CS
EPOXY VALTRON AD1230 4-1 GAL/CS PART A

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
8	6	7	7	7	8	2	8	5	1	4	4

5407956 9 765 47 CS
HARDNER AD1211-B RED PIGMENT

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
7	5	7	3	1	4	2	4	5	1	4	4

5407957 129 765 4,357 CAN
EPOXY fast cure grey

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
180	140	221	423	364	420	451	410	358	467	481	442

5407963 0 765 0 CAN FLAGGED FOR DELETION
MOLD-RELEASE WIZ F-57NC 1 GALLON

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407964 0 765 0 CAN FLAGGED FOR DELETION
MOLD-CLEANER CLEANWIZ 9 1 GALLON

Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
0	0	0	0	0	0	0	0	0	0	0	0

5407967	6	765	3 CAN									
ADHESIVE all purpose & trim #77160												
Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	
1	0	0	0	0	0	0	0	1	1	0	0	
5413542	134	865	3,303 BTL									
WAX SKYLIQUID CLEAR HF4011 2 LITER												
Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	
238	132	210	276	282	285	285	305	280	238	442	330	

Analytical data from North Creek Analytical
(reports from Dianne Mullan/Facilities Lab)

OWW IPA		
Date	Detection Limit	Result (ppm)
7-Jan	10.0	ND
4-Feb	1.0	10.6
4-Mar	1.0	3.16
1-Apr	1.0	3.5
14-May	1.0	21.3
3-Jun	1.0	3.59
7-Jul	1.0	9.49
5-Aug	1.0	154
2-Sep	1.0	10.1
7-Oct	1.0	15.6
4-Nov	1.0	3.73
10-Dec	1.0	4.12
*Average:		8.5

	Million Gallons	
Month	CE Flow	OWW Flow
Jan	25.265	20.33
Feb	22.54	20.22
Mar	23.839	21.075
Apr	24.24	22.479
May	26.35	18.888
Jun	25.77	21.163
Jul	26.784	21.444
Aug	27.063	23.148
Sep	27.33	21.985
Oct	28.489	21.832
Nov	27.57	23.228
Dec	28.923	20.993
Total	314.163	256.785

OWW = Organic Waste Water
(Fab 1 & Fab 2 from Gerry Munroe)
CE = Combined Effluent from DMRs - Process Waste Water Flow, Average
(Weak Acid Drain, or WAD + Concentrated Acid Drain, or CAD)
ppm = mg/l
ND = Not Detected
*Dropped the 7-Jan ND and 5-Aug 154 ppm (low and high) from average.
POTW Flow: (OWW system)
256785000 gallons for the year
21398750 per month, assuming flow is consistent

River Flow: (CE)
314163000 gallons for the year
26180250 per month, assuming flow is consistent

calculating yearly amount of IPA to POTW:

$$\frac{8.5 \text{ gal IPA}}{1000000 \text{ gal water}} \times \frac{256785000 \text{ gal water}}{\text{year}} \times \frac{6.59 \text{ lb IPA}}{\text{gal IPA}} = \frac{14416 \text{ lb IPA}}{\text{year}}$$

14416 lb IPA / year to waste water

::
Total lb VOC in waste water for 1999: 14416 or 7.2 tons

SCOEPA00022924

All input data (yellow shaded areas) received from Petra Hoy in 2000 Waste Shipment Information for Annual ACDP Report.

Mixed Alcohols Waste			
Date	lbs	Avg lb/day	Avg lb/month
1-Apr	413	0.01	350.42
3-Jun	1239	19.67	
15-Jun	75	6.25	
5-Aug	413	8.10	
2-Sep	826	29.50	
7-Oct	413	11.80	
5-Nov	413	14.24	
2-Dec	413	15.30	
Total lbs:	4205		

lbs VOC: 3742 (Waste Profile Number: 321346)

Safety-Kleen Solvent Waste			
Date	lbs	Avg lb/day	Avg lb/month
21-Jan	408	0.01	149.42
16-Apr	208	2.45	
7-Jul	321	3.91	
7-Sep	214	3.45	
13-Oct	214	5.94	
27-Oct	107	7.64	
23-Dec	321	5.63	
Total lbs:	1793		

lbs VOC: 1793 (Safety-Kleen Premium Gold Solvent)

Wax Waste (from Fab 2 - Enya)			
Date	lbs	Avg lb/day	Avg lb/month
8-Jan	493	0.01	485.58
1-Feb	411	17.13	
9-Mar	372	10.33	
1-Apr	394	17.13	
23-Apr	451	20.50	
3-Jun	571	13.93	
15-Jun	163	13.58	
1-Jul	392	24.50	
5-Aug	460	13.14	
2-Sep	598	21.36	
7-Oct	538	15.37	
5-Nov	466	16.07	
2-Dec	518	5.69	
Total lbs:	5827		

lbs VOC: 3496.2 (Waste Profile Number: 325054)

Total lbs VOC in waste shipments for 1999:	9032	or	4.5 tons	
	5535	or	2.8 tons	(not including Wax Waste)
	3742	or	1.9 tons	(cleaning solvent VOCs only, not including Safety-Kleen)

SCOEPA00022925

Worksheet for Cleaning Solvent VOC Emissions

	Cleaning Solvent VOCs				
	5407376				
	Isopropyl Alcohol (IPA) 99%	Total Evaporated or In Wastes	Ratio of monthly to total	VOC Emissions (lbs)	VOC Emissions (tons)
jan	3982.00	3982.00	0.1	2166	1.08
feb	3258.00	3258.00	0.08181818	1772	0.89
mar	2896.00	2896.00	0.07272727	1575	0.79
apr	3258.00	3258.00	0.08181818	1772	0.89
may	2534.00	2534.00	0.06363636	1378	0.69
jun	5068.00	5068.00	0.12727273	2757	1.38
jul	3982.00	3982.00	0.1	2166	1.08
aug	5068.00	5068.00	0.12727273	2757	1.38
sep	3258.00	3258.00	0.08181818	1772	0.89
oct	2172.00	2172.00	0.05454545	1182	0.59
nov	2172.00	2172.00	0.05454545	1182	0.59
dec	2172.00	2172.00	0.05454545	1182	0.59
total	39820	39820		21662	10.8

Total cleaning solvent VOCs: 39820 lbs
Total cleaning solvent VOCs in waste shipments: 3742 lbs (voc to waste water and waste.xls)
Total IPA in waste water: 14416 lbs (voc to waste water and waste.xls)

Total Cleaning Solvent VOC Emissions: 21662 lbs or 10.8 tons

SCOEPA00022926

CONSUMPTION TOTALS

1,999

from Gerry Munroe

SYSTEM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	
NATURAL GAS	MCF	MCF	MCF	MCF	MCF	MCF	MCF	MCF	MCF	MCF	MCF	MCF	
NATURAL GAS USE	17.8	16.1	17.5	15.2	12.5	12.7	11.0	10.3	11.1	12.5	14.0	16.6	167
Boiler 5	6.30	4.90	3.30	4.60	4.20	3.00	3.60	3.40	1.00	1.50	0.40	4.10	
Boiler 6	2.20	4.40	3.10	0.60	4.30	4.90	3.10	0.50	5.80	0.50	1.70	4.70	
Boiler 7	7.90	5.70	5.80	3.30	3.50	3.90	3.80		3.40	2.60	5.50	3.60	
WATER USE	1,000 GAL	1,000 GAL	1,000 GAL	1,000 GAL	1,000 GAL	1,000 GAL	1,000 GAL	1,000 GAL	1,000 GAL	1,000 GAL	1,000 GAL	1,000 GAL	
FAB 1 DEAERATOR #1 MAKEUP	0												
FAB 1 DEAERATOR #2 MAKEUP	2		37	36		0		52	2	70	42	17	
FAB 2 DEAERATOR #3 MAKEUP	89	74	83	64	95	94	73	53	67	18	35	84	
TOTAL BOILER MAKEUP	90	74	120	100	95	94	73	106	68	88	77	101	1,085
COOLING LOOPS:													
LOOP #1 MAKEUP	0	0								1	0		
LOOP #2 MAKEUP	135	148	2,025	158	145	145	137	850	880	101	786	785	
LOOP #3 MAKEUP	3,572	3,264	1,740	3,378	2,844	3,255	3,482	2,839	2,550	3,108	2,186	1,990	
LOOP #4 MAKEUP	11	6	12	7	6	8	9	12	16	13	14	19	
LOOP #5a MAKEUP	0	2	6	6	1	0	1	0	2	17	84	74	
LOOP #5b MAKEUP	0		0	0	6	0	0	0	0	0	0	0	
FAB 2 PCW MAKEUP	0	1	21	2	1	1	0	0	1	86	1	0	
FAB 2 CHILLER MAKEUP	16	15	20	15	10	12	11	15	0			0	
FAB 2 GLYCOL MAKEUP		0											
HEAT RECOVERY MAKEUP		13	0	13	24	35	38	57	46	38	34	33	
TOTAL LOOP MAKEUP	3,734	3,447	3,825	3,578	3,036	3,458	3,677	3,773	3,496	3,364	3,106	2,902	41,393
COOLING TOWERS:													
HVAC TOWER MAKEUP	259	250	294	342	325	422	456	469	448	342	328	99	
GROWING TOWER MAKEUP	181	184	248	230	186	223	325	360	323	261	249	266	
LOOP 3 TOWER	35	25	20	12	31	15	8	3	0		140	119	
FAB 1 TOWER # 16 MAKE UP	350	341	335	394	362	529	560	603	379	279	439	15	
FAB 1 TOWER # 10 MAKE UP	601	590	666	700	662	793	793	781	765	677	920	587	
FAB 1 TOWER # 11 MAKE UP	107		48		205	18	54	438	434	343	199	719	
FAB 2 TOWER #17	1	2	5	36	4	48	15	8	7	9	3	2	
FAB 2 TOWER #18	10	12	2		5		6	31	25	2	2		
FAB 2 TOWER #19	89	98	134	153	168	315	416	511	522	489	343	298	
FAB 2 TOWER #20	17	32	11	4	5	4	3		2				
FAB 2 TOWER #21	58	6	31	60	11	5		6	1				
TOTAL TOWER MAKEUP	1,449	1,289	1,500	1,589	1,638	1,949	2,180	2,743	2,458	2,061	2,294	2,006	23,157
FAB 1 RODI PRODUCTION:													
RO METER 1A	2,005	2,328	2,253	2,530	2,017	2,061	2,163	1,901	2,319	2,601	2,646	3,016	
RO METER 1B	1,940	1,677	1,693	1,806	1,806	2,231	1,975	2,413	1,443	2,036	2,387	2,237	
RO METER 1C	1,623	1,700	1,633	1,506	1,342	1,878	1,759	876	2	1,259	1,755	1,643	
RO METER 2A	2,177	1,756	2,353	2,438	964	830	542	936	900	371	589	430	
RO METER 2B	1,922	1,508	1,697	1,829	1,757	1,700	1,818	1,860	2,913	2,297	2,023	1,984	
RO METER 2C	1,733	1,355	1,852	1,884	1,545	1,807	1,918	2,621	2,796	1,963	1,792	1,902	
FAB 1 RO #1	5,568	5,704	5,579	5,842	5,165	6,170	5,897	5,190	3,763	5,896	6,787	6,896	
FAB 1 RO #2	5,832	4,618	5,901	6,151	4,265	4,337	4,279	5,417	6,609	4,631	4,404	4,315	
FAB 1 RO Output	11,400	10,322	11,480	11,993	9,431	10,507	10,176	10,606	10,372	10,527	11,191	11,211	129,216
EST Fab 1 RO Reject	3,420	3,097	3,444	3,598	2,829	3,152	3,053	3,182	3,112	3,158	3,357	3,363	
EST Fab 1 MM Backwash	92	92	92	92	92	92	92	92	92	92	92	92	
TOTAL FAB 1 RODI USE	14,911	13,510	15,015	15,682	12,352	13,751	13,320	13,880	13,576	13,777	14,640	14,666	169,078
FAB 2 UPW PRODUCTION:													
FAB 2 RO TRAIN 1, BANK 1	1,120	1,872	2,077	1,530	1,553	2,038	1,773	1,757	1,792	2,000	1,911	1,857	
FAB 2 RO TRAIN 1, BANK 2	1,261	1,864	2,046	1,659	1,620	2,063	1,790	1,731	1,770	1,991	1,892	1,907	
FAB 2 RO TRAIN 2, BANK 1	2,103	1,564	1,617	2,078	1,762	1,966	1,769	1,752	1,747	1,965	1,875	1,885	
FAB 2 RO TRAIN 2, BANK 2	2,321	1,580	1,629	2,246	1,770	1,978	1,777	1,773	1,842	1,864	1,911	1,887	
FAB 2 RO TRAIN 3, BANK 1	2,158	1,833	2,082	1,965	1,668	1,784	1,804	1,704	5,182	1,701	1,863	1,833	
FAB 2 RO TRAIN 3, BANK 2	2,131	1,695	2,080	2,004	1,416	1,688	1,805	1,706	1,794	1,775	2,093	1,869	
FAB 2 RO TRAIN 4, BANK 1													
FAB 2 RO TRAIN 4, BANK 2													
FAB 2 RO Output	11,094	10,408	11,531	11,482	9,787	11,517	10,718	10,423	14,127	11,295	11,544	11,238	135,165
EST Fab 2 RO Reject	3,328	3,122	3,459	3,445	2,936	3,455	3,215	3,127	4,238	3,389	3,463	3,371	
EST Fab 2 MM Backwash	1,082	1,015	1,124	1,119	954	1,123	1,045	1,016	1,377	1,101	1,126	1,096	
TOTAL FAB 2 UPW USE	15,504	14,545	16,115	16,046	13,677	16,095	14,978	14,566	19,742	15,785	16,133	15,705	188,893
ESTIMATED DOMESTIC USE	793	666	674	652	584	799	889	928	865	722	797	707	
TOTAL WATER USE	36,482	33,531	37,248	37,647	31,382	36,144	35,118	35,995	40,208	35,797	37,047	36,087	432,683
WASTE TREATMENT:													
Forwarding Flows													
Fab 1 To Fab 2 Flows													
OWW	11,000	10,000	10,800	10,800	9,600	11,000	11,200	11,700	11,200	10,900	11,000	10,700	
CAD	4,000	3,400	3,800	4,000	3,700	3,900	3,800	3,800	4,000	4,300	4,400	4,500	
WAD	9,000	7,800	9,300	9,000	8,100	9,800	9,600	10,100	10,000	10,000	10,700	10,900	
Fab 2 Flows													
OWW													
CAD													
WAD													
WWTP Effluent													
FAB 1 CE	29	35	26	6	17	13	7	7	6	8	42	26	
FAB 2 CE	25,203	22,987	25,544	25,544	23,984	27,931	27,179	27,563	27,508	27,823	29,905	29,007	320,401
FAB 1 OWW	407	343	288	297	591	816	845	1,140	344	875	1,009	544	
FAB 2 OWW	19,923	19,877	20,787	22,182	18,297	20,347	20,599	22,008	21,641	20,957	22,219	20,449	256,782
MV-3	17,187	15,411	17,170	17,172	14,976	16,529	16,503	16,637	11,653	8,592	8,822	9,442	170,093
SANITARY/MV-2	793	666	674	652	584	799	889	928	865	722	797	707	9,076
TOTAL WASTE	63,542	59,320	64,489	65,853	58,448	66,435	66,021	68,283	62,017	58,977	62,794	60,174	756,352
CITY METER													
FAB 1 CITY WATER	31,385	28,054	31,554	31,667	28,660	33,032	33,881	35,429	34,546	33,941	34,756	35,122	
FAB 2 CITY WATER	26,311	24,018	26,935	27,081	24,157	27,740	26,696	25,866	26,101	26,244	27,605	27,538	
TOTAL CITY WATER	57,696	52,072	58,490	58,748	52,816	60,771	60,577	61,295	60,648	60,184	62,361	62,660	708,318
ESTIMATED PROCESS WATER	21,214	18,541	21,242	21,101	21,435	24,627	25,459	25,300	20,442	24,388	25,314	26,573	
OVERALL WATER BALANCE	11	14	12	13	12	11	12	14	6	1	4	(1)	

SCOEPA00022927

Air Emissions Calculations for 1998

Emissions from burning natural gas

Natural gas usage:	
Month	10^6 cf
Jan	17.097
Feb	15.017
Mar	16.491
Apr	14.297
May	13.469
Jun	11.468
Jul	9.946
Aug	9.752
Sep	10.937
Oct	12.381
Nov	13.325
Dec	18.612
Total (cf/year):	162.792

yellow shading indicates user input information

AP-42 emission factors, Vol. I, Table 1.4-1:			
Particulate	3	lb/10^6 cf	(avg of 1 to 5 lb/10^6 cf)
CO	35	lb/10^6 cf	
NOx	140	lb/10^6 cf	
SOx	0.6	lb/10^6 cf	
VOCs	5.8	lb/10^6 cf	(nonmethane+methane)

Assuming all fuel fired equipment behaves according to AP-42,
we can calculate using the annual natural gas usage:

	lb/year	tons/year
Particulate	488	0.24
CO	5697.7	2.8
NOx	22791	11
SOx	98	0.05
VOCs	944	0.47

::

SCOEPA00022928

Summary

NOx pounds for 1998

Jan	149.23
Feb	23.57
Mar	173.23
Apr	267.75
May	1042.05
Jun	772.14
Jul	276.64
Aug	430.59
Sep	989.65
Oct	1161.17
Nov	1220.77
Dec	1130.85
Pounds NOx:	7637.64

Data logger up time:

Total days up:	324	(out of	363	calendar days)
Days up, but not operating	5	(or	44	calendar days not operating)
	Plant-wide shutdown August 24-26. Accounts for three days up, but not operating			
% operating time:	98%	88%		

Estimating total NOx pounds:

7757.35	8691.11	4.345 tons

Highlighted numbers are invalid data due to lack of appropriate data per CEM Manual, 1992

SCOEPA00022929

WACKER
Wacker Siltronic Corporation

Department of Environmental Quality
Northwest Region
Attn: Beth Moore
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201-5884

May 11, 1998 ER067:SM

Subject: AQ-NWR-98-028
Notice of Noncompliance

In response to the Notice of Noncompliance (NON) issued to Wacker Siltronic Corporation on April 29, 1998, manufacturing emissions calculations as outlined in Wacker's April 10, 1998 letter are enclosed. The strip chart emissions calculations and original strip charts covering the remainder of the monitoring period that our continuous emissions monitoring system data collection system was out of service will be kept in the environmental files on site and will be available for review upon request.

If you have any questions, please feel free to contact me at 219-7132 or Tom McCue, Environmental Manager, at 219-7532. We understand that the information provided in this submittal completes the follow-up activities associated with the above-referenced NON.

Sincerely,

WACKER SILTRONIC CORPORATION

Susan E. Mulholland
Environmental Engineer

cc:
1998 Correspondence file
Tom McCue
Cathryn Young

Wacker Siltronic Corporation
P.O. Box 83180
Portland, OR 97283-0180
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00022930

NOx Scrubber Data Loss
Manufacturing Emissions Calculations

Manufacturing Information

NOx Scrubber receives exhaust from Acid Etch Processes in Fab 1 (Operation 3200) and Fab 2 (Cell 4).

NOx Scrubber "data loss" period from January 27 through February 4, 1998.

Total output from January 27 through February 4 =	16,236,068	cm^2	or	1,804,008	cm^2/day average
Highest Acid Etch output between January 27 and February 4	2,824,918	cm^2 (maximum)			
Average Acid Etch output for January 1998 =	1,805,146	cm^2/day			
Total Acid Etch output on January 24 =	2,386,944	cm^2 (output corresponding to highest emissions)			

Manufacturing Emissions Calculations

Evaluate *worst-case* and *typical* emissions during "data loss" period for highest and average production outputs.

From NOX data 98.XLS:
NOx Emissions Range between January 1 and January 26, 1998: 0 to 0.83 lb/hr on January 24

So, *worst-case* (highest production output emissions based on ratio of highest emissions and corresponding production output during prior period)
NOx Emissions = 0.98 lb/hr or **24 lb/day**

Average (average production output emissions based on ratio of highest emissions and average production output during prior period)
NOx Emissions = 0.83 lb/hr or 7,266 lb/yr or **3.6 ton/yr**

NOx Scrubber Data Loss
Emissions Calculations

Background:
NOx Scrubber data recorder malfunctioning since January 27, 1998. The PLC indicates "out of memory." Factory rep was contacted and procedure to remedy situation was recommended. This procedure was implemented, however, "out of memory" messages continue. A strip chart recorder was put in line on February 5, 1998. Various in-house fixes have been tried (*i.e.*, unloading/reloading software).

Current Situation:
A new PLC has been ordered. The applications package for the screen display has been sent back to Nematron (manufacturer) for diagnosis. A redundant data collection system, downloading directly to our facility management system is under development. (This system will not replace the screen display because the operators will still require it.)

Strip Chart Information (Beginning February 5, 1998)

Two,	35 ppm	peaks recorded between February 5 and February 25 (peaks < 1-min duration)	
In general,	20 ppm	peaks recorded between February 5 and February 25 (peaks < 1-min duration)	
Typically,	10 ppm	or less recorded between February 5 and February 25	

Strip Chart Emissions Calculations
Evaluate peak and typical concentrations during strip chart period for range of temperature and flow conditions during representative period.
From Nox_97.xls and NOX data 98.XLS:
Temperature Range between December 18, 1997, and January 26, 1998: 47 to 68 deg F
Flow Range between December 18, 1997, and January 26, 1998: 11799 to 14634 SCFM (ft^3/min)

C_{mass} (ug/m^3) = (P/RT) x C_{ppm} x MW_{NOx} x 10^{-3}; C_{mass} (lb/ft^3) = C_{mass} (ug/m^3) x 1 $m^3/(3.281)^3 ft^3$ x 1 lb/(453*10^6) ug

P = 1 atm
R = 0.08206 l-atm/gmole-K
T = 281 to 293 K
C_{ppm} = 35
MW_{NOx} = 46.01 g/gmole (MW_{NOx} = MW_{NO2} because C_{NO2} in scrubber exhaust dwarfs C_{NO} and NOx = NO2 + NO, in this case)
So,
C_{mass} = 66976 to 69836 ug/m^3 or 4.19E-06 to 4.36E-06 lb/ft^3
So, *worst-case* (highest flow, greatest C_{mass}, assuming 35 ppm peak of 1-hr duration)
NOx Emissions = 0 lb/min or 3.8 lb/hr or **92 lb/day**
Typically, C_{ppm} = 10 or less,
C_{mass} = 19136 to 19953 ug/m^3 or 1.20E-06 to 1.25E-06 lb/ft^3
NOx Emissions = 0 lb/min or 1.1 lb/hr or 9592 lb/yr or **4.8 ton/yr**

Manufacturing Information

NOx Scrubber receives exhaust from Acid Etch Processes in Fab 1 (Operation 3200) and Fab 2 (Cell 4).

NOx Scrubber "data loss" period from January 27 through February 4, 1998.
Total output from January 27 through February 4 = 16,236,068 cm^2 or 1,804,008 cm^2/day average
Highest Acid Etch output between January 27 and February 4 = 2,824,918 cm^2 (maximum)
Average Acid Etch output for January 1998 = 1,805,146 cm^2/day
Total Acid Etch output on January 24 = 2,386,944 cm^2 (output corresponding to highest emissions)

Manufacturing Emissions Calculations

Evaluate *worst-case* and *typical* emissions during "data loss" period for highest and average production outputs.

From NOX data 98.XLS:
NOx Emissions Range between January 1 and January 26, 1998: 0 to 0.83 lb/hr on January 24

So, *worst-case* (highest production output emissions based on ratio of highest emissions and corresponding production output during prior period)
NOx Emissions = 0.98 lb/hr or **24 lb/day**

Average (average production output emissions based on ratio of highest emissions and average production output during prior period)
NOx Emissions = 0.83 lb/hr or 7,266 lb/yr or **3.6 ton/yr**

SCOEPA00022932

November 30, 1998

Susan Mulholland
Wäcker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Ms. Mulholland:

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on November 30, 1998. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria for ± 5 ppm (5% of instrument scale). The system is therefore in compliance with respect to the method criteria. The accuracy of the NO CEM was calculated to be 4.7% and -1.0% for audit points 1 and 2; respectively. The accuracy of the NO_x CEM was calculated to be 10.8% and 0.6% respectively. This leaves both instruments reading slightly high at the mid-range values. PPM differences of the NO CEM were calculated to be 1.2ppm and -0.5ppm respectively. PPM differences of the NOx CEM were calculated to be 2.7ppm and 0.3ppm respectively. This easily meets the criteria of ± 5ppm specified by the method.

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F.

For the CGA, each monitor (NO and NO_x) was challenged three times with three independent audit standards: one zero standard of N_2, and two NIST traceable cylinders of NO gas at concentrations equal to 26% and 55% of the instrument span. The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

If you have any questions, please contact us.

Sincerely,

HORIZON ENGINEERING

Steffan Johnson

attachments: Data Assessment Report
Calibration Gas Certificates

SCOEPA00022934

Data Assessment Report

Client	Wacker Siltronics	Period Ending Date	December 31, 1998
Plant name	Wacker Siltronics, Portland, OR		
Source Unit No.	NOx scrubbing system outlet	Date of Audit	November 30, 1998
Audited by	Steffan Johnson of Horizon Engineering		

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero	Audit Point 1	Audit Point 2	
Cylinder ID No.		CC15829	XCOO6159B	XCOO6129B	
Date of Certification			05/13/97	05/03/96	
Type of Certification			NIST-SRM	NIST-SRM	
Certified Audit Value (NO)			25.21	55.3	
Certified Audit Value (NOx)			25.21	55.3	
% of Span Value			25%	55%	

CEMS Response Time	55 seconds				
Sampled for 2x response time, +					
CEMS Response Value	NO Analyzer / Model # CFA-311A Mfg# 568833012				**Time**
Run 1		2.7	26.70	54.50	1222/1226/1217
Run 2		2.20	26.40	55.10	1236/1229/1240
Run 3		2.90	26.10	54.70	1248/1243/1246
Average		1.70	26.40	54.77	
Accuracy, % difference			4.7%	-1.0%	
Accuracy, difference, ppm			1.2	-0.5	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	**+/- 5**	+/- 5

CEMS Response Value	NOx Analyzer / Model # CFA-311A Mfg# 568833011				**Time**
Run 1		2.00	26.40	53.80	1222/1226/1217
Run 2		4.80	29.10	56.00	1236/1229/1240
Run 3		4.70	28.30	57.10	1248/1243/1246
Average		3.83	27.93	55.63	
Accuracy, % difference			10.8%	0.6%	
Accuracy, difference, ppm			2.7	0.3	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	**+/- 5**	+/- 5

Comments

Heated Line Temp - 197 degrees F

Confirm Logbook Entry _____

SCOEPA00022935

#N2 00

BOC GASES

4715 N.E. 78th Street
Vancouver, WA 98665
Telephone: 360 695 1267
503-283-2561
FAX 360-696-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5479
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted. 55 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC006129B Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	55 ppm	55.3 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By [signature]
Authorized Signature

Check for OFF SPEC result.

WHITE - Customer Copy

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (909) 653-6780 • FAX (909) 653-2430

#N3 ok

REPORT OF ANALYSIS
NIST TRACEABLE GAS MIXTURES

HENGØ1
TO:
DAVID ROSSMAN
HORIZON ENG'G/INFRARED NW
13585 NE WHITAKER WAY
PORTLAND, OR 97230-

DATE: Ø6/Ø2/97

CUSTOMER ORDER NUMBER: ØØ185

CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
XCØØ6159B	Nitric oxide	25.21 ± Ø.25 ppm	SRM 1683b
	Nitrogen,O2-Free	Balance	
	NOx	25.21 ppm	

ppm = umole/mole % = mole-%

The above analysis is traceable to the National Institute of Standards and Technology by intercomparison with the reference standard listed above.
Where indicated, volumetric and gravimetric reference standards are traceable thru use of our analytical balance, NIST Weight Report No. MMAP 232.09/202491.

Analyst: B.E. Gross

Approved: J.T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.

STANDARD CALIBRATION GASES IN ALUMINUM CYLINDERS

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

September 18, 1998

Susan Mulholland
Wacker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Ms. Mulholland:

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on September 8, 1998. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria of less than 15% of the audit value or ± 5 ppm, whichever is higher. The accuracy of the NO CEM was calculated to be 4.3% and -0.4% for audit points 1 and 2; respectively. The accuracy of the NO_x CEM was calculated to be 0.2% and -3.4% respectively.

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F.

For the CGA, each monitor (NO and NO_x) was challenged three times with three independent audit standards: one zero standard of N_2, and two NIST traceable cylinders of NO gas at concentrations equal to 26% and 55% of the instrument span. The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

If you have any questions, please contact us.

Sincerely,

HORIZON ENGINEERING

Joe D. Fiedler

Joe D. Fiedler

attachments: Data Assessment Report
Calibration Gas Certificates

SCOEPA00022939

Data Assessment Report

Client	Wacker Siltronics	Period Ending Date	
Plant name	Wacker Siltronics, Portland, OR		
Source Unit No.	NOx scrubbing system outlet	Date of Audit	September 08, 1
Audited by	Joe Fiedler of Horizon Engineering		

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero	Audit Point 1	Audit Point 2	
Cylinder ID No.			XCOO6159B	XCOO6129B	
Date of Certification			05/13/97	05/03/96	
Type of Certification			NIST-SRM	NIST-SRM	
Certified Audit Value (NO)			25.21	55.3	
Certified Audit Value (NOx)			25.21	55.3	
% of Span Value			25%	55%	

CEMS Response Time	58 seconds				
Sampled for 2x response time, +					
CEMS Response Value	NO Analyzer / Model # CFA-311A Mfg# 568833012				**Time**
Run 1		2.7	26.30	55.00	1247/1249/1251
Run 2		2.50	26.00	55.10	1253/1255/1258
Run 3		3.60	26.60	55.10	1300/1302/1304
Average		2.03	26.30	55.07	
Accuracy, % difference			4.3%	-0.4%	
Accuracy, difference, ppm			1.1	-0.2	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	**+/- 5**	+/- 5

CEMS Response Value	NOx Analyzer / Model # CFA-311A Mfg# 568833011				**Time**
Run 1		4.80	26.10	52.50	1247/1249/1251
Run 2		3.90	25.30	51.90	1253/1255/1258
Run 3		3.40	24.90	51.30	1300/1302/1304
Average		4.03	25.43	51.90	
Accuracy, % difference			0.9%	-6.1%	
Accuracy, difference, ppm			0.2	-3.4	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	**+/- 5**	+/- 5

Comments

Heated Line Temp - 197 degrees F

Confirm Logbook Entry x

SCOEPA00022940

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (909) 653-6780 • FAX (909) 653-2430

#N3 04

REPORT OF ANALYSIS
NIST TRACEABLE GAS MIXTURES

HENGØ1
TO:
DAVID ROSSMAN
HORIZON ENG'G/INFRARED NW
13585 NE WHITAKER WAY
PORTLAND, OR 97230-

DATE: Ø6/Ø2/97

CUSTOMER ORDER NUMBER: ØØ185

CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
XCØØ6159B	Nitric oxide	25.21 ± Ø.25 ppm	SRM 1683b
	Nitrogen,O2-Free	Balance	
	NOx	25.21 ppm	

ppm = umole/mole % = mole-%

The above analysis is traceable to the National Institute of Standards and Technology by intercomparison with the reference standard listed above.
Where indicated, volumetric and gravimetric reference standards are traceable thru use of our analytical balance, NIST Weight Report No. MMAP 282.09/202491.

Analyst: B.E. Gross

Approved: J.T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.

SCOEPA00022941

#N2 OK

BOC GASES

4715 N.E. 78th Street
Vancouver, WA 98665
Telephone: 360 695 1267
503-283-2561
FAX 360-696-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5479
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted. 55 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC006129B Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	55 ppm	55.3 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By [signature]
Authorized Signature

Check for OFF SPEC result.

WHITE - Customer Copy

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

SOURCE EVALUATION REPORT

WACKER SILTRONICS CORPORATION

NO_x Scrubber System Outlet
Total Nitrogen Oxides
CEMS Relative Accuracy Test

May 12, 1998

Prepared for

Wacker Siltronics Corporation
7200 NW Front
Portland, OR 97283

by
Joe D. Fiedler
&
David R. Rossman, P.E.

Expires 12/31/98

Air Pollution Emission Testing • Infrared Inspections • Mechanical Engineering

Introduction

Relative accuracy (RA) tests were made to confirm the accuracy of the continuous emission monitoring system (CEMS) for nitrogen oxides (NO_x), volume flow rate, and emission rate from the NO_x scrubber at the Wacker Siltronics plant in Portland, Oregon.

The system was tested on May 12, 1998, to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for relative accuracy testing.

Horizon Engineering personnel Kurt Torgerson and David Bagwell did the field work. Susan Mulholland was the site contact person at Wacker Siltronics and she coordinated plant operation and data acquisition for the CEMS. Olom Philovanghn and Dan Fuller monitored process data and assisted in the data collection.

Summary of Results

The results show that the NO_x monitoring system meets the performance standards in terms of the RA (maximum allowed difference) of less than 20% for concentration, flow rate, and NO_x emission rate. Table 1 summarizes the results of the RA testing. Run 2 was aborted due to Wacker's data logging system inadvertently being shut down. A leak was detected in the Reference Method (RM) sampling system during Run 9 and Horizon personnel fixed the problem before starting Run 10. Although the results of all runs in a set must be reported, the standards allow the use of the best nine runs in determining RA between the CEMS and the RM. The results were acceptable when all tests were used in the calculation or when the best nine tests were used.

Table 1
Relative Accuracy Test Results

NO_x Scrubber Outlet
Test Date: May 12, 1998

	Relative Accuracy All 11 Runs	Relative Accuracy Best 9 Runs
NO_x Concentration (ppmv)		
Actual difference	-2.1	-1.6
RA based on mean value (%)	15.0	11.5
Volume Flow Rate (dscf/min)		
Actual difference	493	313
RA based on mean value (%)	10.7	10.0
NO_x Emission Rate (lb/hr)		
Actual difference	-0.08	-0.04
RA based on mean value (%)	12.5	10.8
RA allowable, based on mean value (%)	20	20

Average NO_x Emission Rate, lb/hr	1.5
Allowable NO_x Emission Rate, lb/hr*	5.4

* Permit limit cited is based on 130 lb/day for "wafer manufacturing process"

Description of the Source and its Operation

NO_x-contaminated air is pulled through three packed-bed chemical scrubbers by a fan located upstream from the sampling port and downstream from the last scrubber. The liquid chemicals and gaseous NO_x/air mixture flow in different directions and have a high residence time in the scrubbers due to the packed beds. This residence time is sufficient to reduce the NO_x emissions well below permit standards. A new, larger stack and fan have been added to this system since the last RA testing.

Sampling and Analytical Procedures

General The work was done according to guidelines of Performance Specification 2 (CFR 40, Pt. 60, Appendix B) for NO_x. EPA Reference Method 7E was used to determine NO_x with EPA Methods 1 and 2 and ODEQ Method 4 for determining the system flow rate. The RA testing consisted of twelve 23-minute sampling runs (21 minutes plus twice the response time of the system). Averages were based on the middle 21 minutes of each run. The table below describes the gas analyzer used for the method.

Reference Method Analyzer

Gas	Brand	Model	Range	Measurement Method
NO_x	TECO	10A/R	0-100	Chemiluminescent

A probe was prepared for the testing by drilling holes at three points (16.7%, 50%, 83.3% of stack diameter) as specified in the method. Gas sample was drawn into an ice-water cooled condenser (to remove moisture) by a Teflon-lined sample pump and was pulled through a 75 ft. Teflon umbilical to the instrument van on the ground.

The NO_x analyzer was first calibrated with certified calibration gas. Then the entire sampling system was verified by introducing calibration gas near the

sampling probe inlet. This bias check was conducted before and after every test run. The results of all calibrations are included in the Appendix.

Flow Rate The volume flow rate was measured at the end of each run. An S-type pitot, described in EPA Method 2, was used for the velocity pressure measurements. A fluid-filled, inclined manometer indicated the pressures at each traverse point location. Twelve points on each diameter were checked. Temperatures were measured with a k-type thermocouple and a Fluke Model 52 digital thermocouple indicator.

Data The analyzer output was read every five seconds during the tests by a Rustrak Ranger II data logger. Printouts of the plots from the data logger are in the Appendix. After the completion of all the testing, data sets from the plant CEMS were generated and passed along to us by the Wacker technicians.

Calculations The data sets were compared using the formulas in Performance Specification 2. Results worksheets, in the Appendix, include calculations using all test data sets and are repeated using only the nine data sets that had the best agreement.

Discussion

The results of the tests show that the NO_x CEMS is operating within the allowable specifications. As previously mentioned, Run 2 was aborted due to shutdown of the data recording system. Also, a leak was detected in Horizon's sampling system during Run 9. Field personnel fixed the leak before starting Run 10. All Reference Method instrument calibrations and all testing parameters were within specifications. Measured emissions for the 12 tests averaged 0.83 lb/hr. The Permit limit for the source is about 5.4 lb/hr (based on the daily allowable rate).

APPENDIX

Nomenclature

Gases

- RA Results
- Wacker Siltronics Data
- Data Logger Plots
- Drift Corrections
- Field Data
- NOx Converter Efficiency Test Results

Flow Rates

- Calculations
- Field Data
- Traverse Point Locations

Calibration Gas Certificates

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

April 13,1998

Project No. 956

Susan Mulholland
Wacker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Miss Mulholland:

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on March 20, 1998. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria of less than 15% of the audit value or ± 5 ppm, whichever is higher. The accuracy of the NO CEM was calculated to be 5.1% and -0.8% for audit points 1 and 2; respectively. The accuracy of the NO_x CEM was calculated to be 5.3% and -1.4% respectively.

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F.

SCOEPA00022949

For the CGA, each monitor (NO and NO_x) was challenged three times with three independent audit standards: one zero standard of N_2, and two NIST traceable cylinders of NO gas at concentrations equal to 26% and 80% of the instrument span. The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The documentation for the calibration gas bottle that was used for audit point 2 could not be found. In lieu of the calibration certificate the bottle was compared to two EPA Protocol 1 gas bottles. The values of those gases were 151.0 and 67.6 ppm. Three runs were done and the averages were drift corrected. The value of the audit point 2 gas bottle came out to 79.5 ppm. The draft report was changed to reflect the new value. The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

If you have any questions, please contact us.

Sincerely,

HORIZON ENGINEERING

Joe D. Fiedler

attachments: Data Assessment Report
Calibration Gas Certificates
Calibration Recertification Data
Drift Correction Data

SCOEPA00022950

Data Assessment Report

Client	Wacker Siltronics	Period Ending Date	
Plant name	Wacker Siltronics, Portland, OR		
Source Unit No.	NOx scrubbing system outlet	Date of Audit	March 20, 1998
Audited by	Joe Fiedler of Horizon Engineering		

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero	Audit Point 1	Audit Point 2	
Cylinder ID No.			CAO3076	SA5765	
Date of Certification			4/10/97	03/13/98	
Type of Certification			NIST-SRM		
Certified Audit Value (NO)			25.65	79.5	
Certified Audit Value (NOx)			25.65	79.5	
% of Span Value			26%	80%	

CEMS Response Time	58 seconds				
Sampled for 2x response time, +					
CEMS Response Value	NO Analyzer / Model # CFA-311A Mfg# 568833012				**Time**
Run 1		1.90	26.80	78.90	1310/1313/1316
Run 2		2.40	26.80	79.10	1319/1321/1323
Run 3		2.70	27.30	78.60	1326/1329/1332
Average			26.97	78.87	
Accuracy, % difference			5.1%	-0.8%	
Accuracy, difference, ppm			1.3	-0.6	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	**12**
or,	ppm	**+/- 5**	+/- 5

CEMS Response Value	NOx Analyzer / Model # CFA-311A Mfg# 568833011				**Time**
Run 1		1.90	26.80	78.60	1310/1313/1316
Run 2		2.50	27.10	78.10	1319/1321/1323
Run 3		2.20	27.10	78.50	1326/1329/1332
Average			27.00	78.40	
Accuracy, % difference			5.3%	-1.4%	
Accuracy, difference, ppm			1.4	-1.1	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	**12**
or,	ppm	**+/- 5**	+/- 5

Comments

Heated Line Temp - 197 degrees F

Confirm Logbook Entry x

SCOEPA00022951

#N7
ok

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (909) 653-6780 • FAX (909) 653-2430

REPORT OF ANALYSIS
NIST TRACEABLE GAS MIXTURES

HENGØ1
TO:

DATE: Ø4/1Ø/97

DAVID ROSSMAN
HORIZON ENG'G/INFRARED NW
13585 NE WHITAKER WAY
PORTLAND, OR 97230-

CUSTOMER ORDER NUMBER: 1828

CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
CAØ3Ø76	Nitric oxide	25.65 ± Ø.26 ppm	SRM 2629a
	Nitrogen,O2-Free	Balance	
	NOx	25.65 ppm	

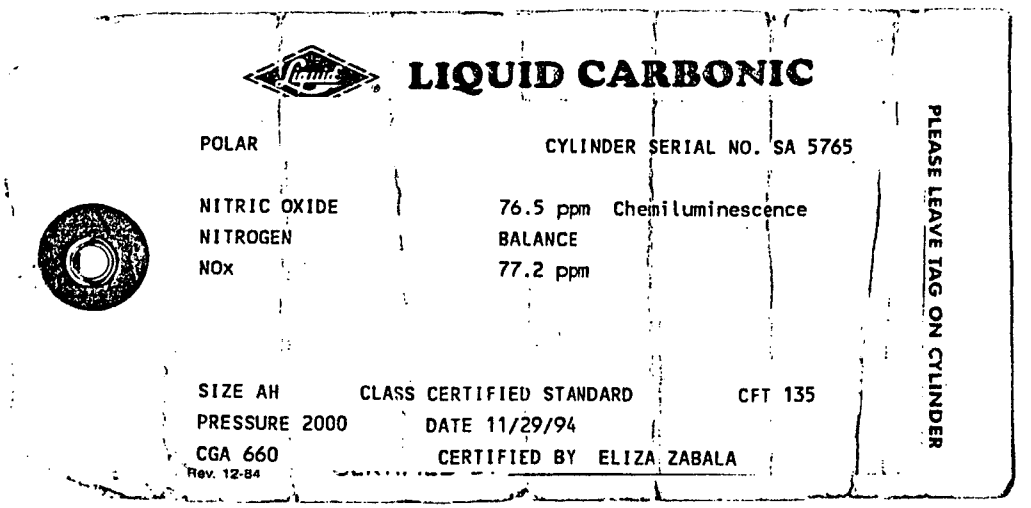
ppm = umole/mole % = mole-%

The above analysis is traceable to the National Institute of Standards and Technology by intercomparison with the reference standard listed above.
Where indicated, volumetric and gravimetric reference standards are traceable thru use of our analytical balance, NIST Weight Report No. MMAP 232.Ø9/2Ø2491.

Analyst: B.E. Gross

Approved: J.T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.



LIQUID CARBONIC

POLAR

CYLINDER SERIAL NO. SA 5765

NITRIC OXIDE	76.5 ppm	Chemiluminescence
NITROGEN	BALANCE	
NOx	77.2 ppm	

SIZE AH CLASS CERTIFIED STANDARD CFT 135

PRESSURE 2000 DATE 11/29/94

CGA 660 CERTIFIED BY ELIZA ZABALA

Rev. 12-84

PLEASE LEAVE TAG ON CYLINDER

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (909) 653-6780 • FAX (909) 653-2430

002021
#E3
OK
03-09-98

REPORT OF ANALYSIS
EPA PROTOCOL GAS MIXTURES

HENGØ1
TO:
DAVID ROSSMAN
HORIZON ENG'G-INFRARED NW
13585 NE WHITAKER WAY
PORTLAND, OR 97230-

DATE : Ø2/27/98

CUSTOMER ORDER NUMBER: ØØ2Ø21

COMPONENT	CONCENTRATION(v/v) +/-EPA UNCERTAINTY	REFERENCE STANDARD	ANALYZER MAKE,MODEL,S/N,DETECTION	EXPIRATION DATE	REPLICATE ANALYSIS DATA	
CYLINDER NO.:	CC53877					
			Monitor Labs Model 8440		02/17/98	02/26/98
Nitric oxide	69.1 ±.4 ppm	GMIS	S/N 136	Ø2/26/ØØ	69.Ø ppm	69.1 ppm
NOx	69.1 ppm	Cylinder #	Continuous		68.9 ppm	68.8 ppm
Nitrogen,O2-Free Balance		CC117928	Chemiluminescence		69.Ø ppm	69.3 ppm
Cylinder Pressure: 2ØØØ psig		@ 101.6 ppm	Last Cal Date: Ø2/10/98		Mean: 69.Ø ppm	69.1 ppm

ppm = umole/mole % = mole-%

The above analyses were performed in accordance with Procedure G1 of the EPA Traceability Protocol, Report Number EPA-600/R93/224, dated September, 1993.
This cylinder should not be used if the pressure is less than 150 psig.

Analyst: _____ Approved: _____

B.E. Gross J.T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.

Air Products and Chemicals, Inc.
SPECIALTY GAS DEPARTMENT
23320 S. ALAMEDA STREET
LONG BEACH, CA 90810

Certificate of Analysis - EPA Protocol Gas Standard

PERFORMED ACCORDING TO EPA TRACEABILITY PROTOCOL FOR ASSAY AND CERTIFICATION OF GASEOUS CALIBRATION STANDARDS (PROCEDURE #G1)

Customer:
AIR PRODUCT & CHEMICALS, INC.
940 S.E. 7TH AVE. Notes:
PORTLAND OR 97214-

PO: 584728 Rel:

Order No: 591-088867-03
Batch No: 863-20982

Cylinder No: CC53879
Cylinder Pressure*: 2000 psig
Certification Date: 01/22/96
Expiration Date: 01/22/98

*** Certified Concentration ***		********* Reference Standards *********			********** Analytical Instrumentation *********			
Component	Certified Concentration	Cylinder #	Standard Number	Concentration	Instrument Make/Model	Serial Number	Last Calibration	Measurement Principal
NITRIC OXIDE	151 ±0.8 PPM	SG871972NB	GMIS	149.9000 PPM	BECKMAN/951A	0100722	12/28/95	CHEMILUMINESCENCE

Balance Gas: NITROGEN

Contaminent
Nitrogen Dioxide 1.50 PPM

---

* Standard should not be used below 150 psig

Analyst: RICHARD PARK

Approved By: KOOK JEON

#E4 OK

HORIZON ENGINEERING llc

Calibration Field Record

Client GAS BOTTLE CERT
Date 4-13-98
Source

Tester JDF
Observer
Data Logger ID

Leak Checks: Pre-OK Post-OK Response Time	Cylinder #	Span Gas	Cylinder Value (CV)	START Analyzer Calibration Response (ACR)	END Start Run System Calibration Response (SCRx)	End Run / Start Run / System Calibration Response (SCRx)	End Run / Start Run / System Calibration Response (SCRx)	End Run / System Calibration Response (SCRy)	
Times				1125	1143				
CO2 % ch___		CO2							
Range		CO2							
Analyzer Model		N2							
Analyzer SN:									
CO ppm ch___		CO							
Range		CO							
Analyzer Model		N2							
Analyzer SN:									
O2% ch___		O2							
Range		O2							
Analyzer Model		N2							
Analyzer SN:									
NOx ppm ch___		NOx	151.0	151.2	150.9				
Range 0-200		NOx	69.1	67.6	67.5				
Analyzer Model		N2	0.00	0.00	-0.02				
Analyzer SN:									
TGOC ppm ch___									
Range									
Analyzer Model									
Analyzer SN:		N2							
				RUN1	RUN2	RUN 3			
ch___									
Range									
Analyzer Model		NOx	77.2	78.4	78.1	78.0			
Analyzer SN:		N2							

Check	Performance Specs		
Analyzer Calibration Error	| ACR-CV | / SPAN	2 (25A @ 5%)	Hot Line Temp
Sampling System Bias	(SRCx-ACR) /SPAN	5	Hot Line Temp
Zero and Cal Drift	(SRC2-SRC1) /SPAN	3	

Test Times	Run 1	Run 2	Run 3
Start Time	1133	1138	1142
End Time			

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gas bottle certification						4/13/98
Whitaker Shop						jdf
Portland, OR						gascert.wb1
Number of Completed Runs			Run 1	Run 2	Run 3	Average
Date Tested			18-Nov	18-Nov	18-Nov	
System Calibration Time - Initial		Tci	11:25	11:25	11:25	
Test Time-Starting		Tts	11:33	11:38	11:42	
Test Time-Ending		Tte	11:33	11:38	11:42	
System Calibration Time - Final		Tcf	11:43	11:43	11:43	
Test Mid-point Time		Tx	11:33	11:38	11:42	
Nitrogen Oxides	NOx	Span	200	200	200	
Number of Completed Runs			3			
Indicated average-Dry	ppmv	Cid	78.4	78.1	78.0	78.2
Cylinder Value - High Range calibration gas	ppmv	Cma	151.0	151.0	151.0	
Cylinder Value - Low Range (Zero) calibration gas	ppmv	Coa	69.1	69.1	69.1	
System Calibration Response - High Range gas - Initial	ppmv	Cmi	151.2	151.2	151.2	
System Calibration Response - Low Range gas - Initial	ppmv	Coi	67.6	67.6	67.6	
System Calibration Response - Low Range gas - Final	ppmv	Cof	67.5	67.5	67.5	
System Calibration Response - High Range gas - Final	ppmv	Cmf	150.9	150.9	150.9	
Actual average - Dry (Corrected for Drift)	ppmv-NO2	Cgas	79.74	79.48	79.40	79.54

Pounds VOCs Evaporated or In Wastes (1998)														
Part no SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly total
5406902	Spraypaint *	2.38	10.71	3.57	8.33	19.04	23.80	5.95	17.85	5.95	22.61	16.66	1.19	138.04
5407103	Sealant Silicone White 10.3 OZ tube	0.00	0.00	0.00	0.00	0.08	0.02	0.00	0.05	0.00	0.06	-0.03	0.00	0.18
5407104	Sealant Rubber Silicone RTV GE #W102 cart	0.03	0.08	0.10	0.03	0.05	0.00	0.10	0.08	0.00	0.15	0.08	0.00	0.70
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	0.04	0.00	0.30	0.17	0.00	0.00	0.00	0.00	0.04	0.00	0.09	0.00	0.65
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	0.26	0.00	0.09	0.22	0.35	0.22	0.91	0.09	0.09	0.00	0.00	0.00	2.21
5407328	Cleaner Instant Contact #CRC-02016	8.84	1.47	2.95	13.26	1.47	0.00	27.99	0.00	0.00	16.20	8.84	8.84	89.86
5407330	Cleaner Dust Chaser Spray VWR# 21899-094	4.65	33.73	9.30	13.96	11.63	16.28	13.96	9.30	18.61	2.33	12.79	17.45	163.99
5407332	Cleaner Electric Motor KAR #65390-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	1.52
5407334	Stripper / Remover For Paint, Carbon &	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28	0.00	1.28
	Safety-Kleen Premium Gold Solvent	226.85	226.85	173.47	226.85	226.85	400.32	453.70	0.00	400.32	286.90	226.85	173.47	3022.42
5407376	Isopropyl Alcohol (IPA) 99%	3982.00	3620.00	4706.00	4344.00	4344.00	4344.00	4344.00	4344.00	5068.00	4344.00	4344.00	4706.00	52490.00
5407408	Lubricant Spray Molykote 321R Dow-Corning	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
5407431	Lubricant CRC 3-36 #03005	0.89	1.73	0.72	1.31	0.95	1.43	0.95	0.60	0.24	1.55	0.00	1.19	11.56
5407433	Lubricant CRC 3-36 (Gallon Can)	1.91	0.00	0.00	0.00	0.95	0.48	0.48	0.00	0.00	0.95	0.00	0.00	4.77
5407435	Lube Teflon #79417	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	1.28	1.92
5407436	Lubricant Teflon Dry #79418	0.00	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
5407439	Cement Neoprene Turntable Covering Carbo	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35
5407466	Skyliquid Wax for Enya, HF-3511	0.00	0.00	7.52	0.00	39.70	5.88	0.00	55.88	39.70	5.88	0.00	0.00	154.57
5407470	Cleaner Zero Residue Instant Teck Spray	0.06	0.57	0.62	0.00	0.11	0.00	0.45	0.00	0.00	0.00	0.28	0.11	2.21
5407938	Caviclean #2 Cleaning Solution Turco	0.00	57.80	57.80	57.80	57.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	231.18
5407947	Lubricant Silicon	0.00	0.00	0.89	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78
5407948	Grease Multi Purpose White	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.56
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	32.03	28.02	20.02	24.02	44.04	12.01	12.01	8.01	16.01	20.02	28.02	20.02	264.21
5407956	Hardner AD1211-B Red Pigment	3.67	2.29	2.29	1.38	4.13	1.83	2.29	1.38	1.38	2.75	3.67	2.29	29.36
5407957	Epoxy STC Fast Cure Grey	11.63	12.00	12.30	26.68	15.71	11.86	12.37	8.97	14.82	13.34	14.82	13.34	167.84
5407963	Mold-Release Wiz F-57NC 1 Gallon	0.00	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33
5407967	Adhesive Tixo K-10 10 Gm/Each	1.20	0.00	0.00	1.20	0.00	1.20	2.41	0.00	0.00	0.00	1.20	0.00	7.22
5413542	Skyliquid Wax for Enya, HF-4011	545.37	566.03	605.96	505.43	504.05	572.91	289.21	195.56	258.91	347.05	377.35	294.72	5062.55
	Total Per Month:	4822.21	4568.95	5605.16	5224.62	5271.81	5392.24	5166.78	4641.75	5824.71	5064.36	5035.90	5241.42	

Total VOCs Evaporated or In Wastes (1998): 61859.91 lbs or 30.93 tons

VOCs to waste water: 13137 (voc to waste water and waste.xls - 1998)

VOCs to waste: 4090 (voc to waste water and waste.xls - 1998)

Total VOCs Evaporated (1998): 44632.93 lbs or 22.32 tons

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Worksheet for Cleaning Solvent VOC Emissions

	Cleaning Solvent VOCs				
	5407376				
	Isopropyl Alcohol (IPA) 99%	Total Evaporated or In Wastes	Ratio of monthly to total	VOC Emissions (lbs)	VOC Emissions (tons)
jan	3982.00	3982.00	0.07586207	2874	1.44
feb	3620.00	3620.00	0.06896552	2613	1.31
mar	4706.00	4706.00	0.08965517	3396	1.70
apr	4344.00	4344.00	0.08275862	3135	1.57
may	4344.00	4344.00	0.08275862	3135	1.57
jun	4344.00	4344.00	0.08275862	3135	1.57
jul	4344.00	4344.00	0.08275862	3135	1.57
aug	4344.00	4344.00	0.08275862	3135	1.57
sep	5068.00	5068.00	0.09655172	3658	1.83
oct	4344.00	4344.00	0.08275862	3135	1.57
nov	4344.00	4344.00	0.08275862	3135	1.57
dec	4706.00	4706.00	0.08965517	3396	1.70
total	52490	52490		37883	18.9

Total cleaning solvent VOCs: 52490 lbs
Total cleaning solvent VOCs in waste shipments: 1470 lbs (voc to waste water and waste.xls)
Total IPA in waste water: 13137 lbs (voc to waste water and waste.xls)

Total Cleaning Solvent VOC Emissions: 37883 lbs or 18.9 tons

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Pounds VOCs Purchased (1998)														
Part no SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly total
5406902	Spraypaint *	2.38	10.71	3.57	8.33	19.04	23.80	5.95	17.85	5.95	22.61	16.66	1.19	138.04
5407103	Sealant Silicone White 10.3 OZ tube	0.00	0.00	0.00	0.00	0.08	0.02	0.00	0.05	0.00	0.06	-0.03	0.00	0.18
5407104	Sealant Rubber Silicone RTV GE #W102 cart	0.03	0.08	0.10	0.03	0.05	0.00	0.10	0.08	0.00	0.15	0.08	0.00	0.70
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	0.04	0.00	0.30	0.17	0.00	0.00	0.00	0.00	0.04	0.00	0.09	0.00	0.65
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	0.26	0.00	0.09	0.22	0.35	0.22	0.91	0.09	0.09	0.00	0.00	0.00	2.21
5407328	Cleaner Instant Contact #CRC-02016	8.84	1.47	2.95	13.26	1.47	0.00	27.99	0.00	0.00	16.20	8.84	8.84	89.86
5407330	Cleaner Dust Chaser Spray VWR# 21899-094	4.65	33.73	9.30	13.96	11.63	16.28	13.96	9.30	18.61	2.33	12.79	17.45	163.99
5407332	Cleaner Electric Motor KAR #65390-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	1.52
5407334	Stripper / Remover For Paint, Carbon &	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28	0.00	1.28
	Safety-Kleen Premium Gold Solvent	226.85	226.85	173.47	226.85	226.85	400.32	453.70	0.00	400.32	286.90	226.85	173.47	3022.42
5407376	Isopropyl Alcohol (IPA) 99%	3982.00	3620.00	4706.00	4344.00	4344.00	4344.00	4344.00	4344.00	5068.00	4344.00	4344.00	4706.00	52490.00
5407408	Lubricant Spray Molykote 321R Dow-Corning	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
5407431	Lubricant CRC 3-36 #03005	8.94	17.28	7.15	13.11	9.54	14.30	9.54	5.96	2.38	15.50	0.00	11.92	115.62
5407433	Lubricant CRC 3-36 (Gallon Can)	19.07	0.00	0.00	0.00	9.54	4.77	4.77	0.00	0.00	9.54	0.00	0.00	47.68
5407435	Lube Teflon #79417	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	1.28	1.92
5407436	Lubricant Teflon Dry #79418	0.00	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
5407439	Cement Neoprene Turntable Covering Carbo	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35
5407466	Skyliquid Wax for Enya	0.00	0.00	7.52	0.00	68.75	10.18	0.60	96.76	68.75	10.18	0.00	0.00	262.75
5407470	Cleaner Zero Residue Instant Teck Spray	0.06	0.57	0.62	0.00	0.11	0.00	0.45	0.00	0.00	0.00	0.28	0.11	2.21
5407938	Caviclean #2 Cleaning Solution Turco	0.00	57.80	57.80	57.80	57.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	231.18
5407947	Lubricant Silicon	0.00	0.00	0.89	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78
5407948	Grease Multi Purpose White	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.56
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	32.03	28.02	20.02	24.02	44.04	12.01	12.01	8.01	16.01	20.02	28.02	20.02	264.21
5407956	Hardner AD1211-B Red Pigment	3.67	2.29	2.29	1.38	4.13	1.83	2.29	1.38	1.38	2.75	3.67	2.29	29.36
5407957	Epoxy STC Fast Cure Grey	11.63	12.00	12.30	26.68	15.71	11.86	12.37	8.97	14.82	13.34	14.82	13.34	167.84
5407963	Mold-Release Wiz F-57NC 1 Gallon	0.00	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33
5407967	Adhesive Tixo K-10 10 Gm/Each	1.20	0.00	0.00	1.20	0.00	1.20	2.41	0.00	0.00	0.00	1.20	0.00	7.22
5413542	Skyliquid Wax for Enya, HF-4011	944.36	980.13	1049.29	875.20	872.82	992.05	500.80	338.63	448.33	600.96	653.42	510.34	8766.32
	Total Per Month:	5246.42	4998.61	6054.92	5606.19	5686.78	5832.85	5391.84	4831.07	6045.32	5345.10	5311.97	5467.76	

Total VOCs Purchased (1998): 65818.83 lbs or 32.91 tons

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SAP Material Number	Container Size	Form	Density/ Specific Gravity	Lb/gal	Gal/each	Lb/each	Fraction of product used	VOC Fraction	Evap Fraction	MSDS Number	Date added to list or revised	Comments
5406902		L		0		1.4	1	0.85	1			Lb/each and VOC Fraction inherited with spreadsheet
5407103	10.3oz Tub	Paste	1.04	8.6736		0.64375	1	0.025	1	2148		
5407104	10.3oz Car	Solid	1.06	8.8404		0.64375	1	0.04	1	2575		
5407107	8 oz Sp Can	L	1.04	8.6736	0.0625	0.5421	1	0.08	1	2337		
5407108	8 oz Sp Can	L	1.04	8.6736	0.0625	0.5421	1	0.08	1	2337		
5407328	15oz Sp Can	L	1.57	13.0938	0.117188	1.53443	1	0.96	1	2093		MSDS in 1997 TRI Notebook
5407330	15oz Sp Can	L	1.19	9.9246	0.117188	1.163039	1	1	1			MSDS not in File Magic; Specific Gravity inherited with spreadsheet
5407332	16oz Sp Can	L	1.5	12.51	0.125	1.56375	1	0.243	1	2169		
5407334	16oz Sp Can	L	0.9	7.506	0.125	0.93825	1	0.68	1	2252		
	1 Gal	L	0.8	6.7	1	6.7	1	1	1	2582	Added 2/8/99	Evap Fraction left at 1 because amount shipped as waste accounted for later
5407376	55 Gal Dm	L	0.7855	6.55107	55	362	1	1	1	2580		Evap Fraction left at 1 because amount discharged to POTW in waste water accounted for later; Lb/Dm from VW&R Customer Sales by Product for 1997
5407408	11oz Sp Can	L	1	8.34	0.085938	0.716719	1	0.57	1	2419		MSDS in 1997 TRI Notebook; Specific Gravity assumed - none listed
5407431	16oz Sp Can	L	0.8167	6.81128	0.125	0.85141	1	0.7	0.1	1011		Evap Fraction corresponds to "slow 0.01" Evaporation Rate noted on MSDS
5407433	1 Gal Pl Btl	L	0.8167	6.81128	1	6.811278	1	0.7	0.1	1010		Evap Fraction corresponds to "slow 0.01" Evaporation Rate noted on MSDS
5407435	20oz Sp Can	L	0.6	5.004	0.15625	0.781875	1	0.82	1	2344		
5407436	16oz Sp Can	L	0.6	5.004	0.125	0.6255	1	1	1	2154		Specific Gravity assumed - none on MSDS
5407439	16oz Btl	L	0.81	6.7554	0.125	0.844425	1	0.8	1	2427		MSDS in 1997 TRI Notebook
5407466	2 L Pl Btl	L	0.889	7.41426	0.528346	3.917293	0.75	0.65	0.77	2631		Assumed same process test data as PN 5413542 because similar formula; MSDS in 1997 TRI Notebook
5407470	16oz Sp Can	L	1.004	8.37336	0.125	1.04667	1	0.0541	1	2803		
5407938	55 Gal Dm	L	1.05	8.757	55	481.635	1	0.12	1	2740		VOC Fraction inherited with spreadsheet
5407947	20oz Sp Can	L	0.76	6.3384	0.15625	0.990375	1	0.9	1	2340		
5407948	20oz Sp Can	L	0.9	7.506	0.15625	1.172813	1	0.24	1	2332		
5407955	1 Gal Can	S	1.2	10.008	1	10.008	1	0.4	1	2750		VOC Fraction inherited with spreadsheet - none on MSDS
5407956	16oz Can	L	1.1	9.174	0.125	1.14675	1	0.4	1	2749		
5407957	10 oz Can		1.54	12.8436	0.078125	1.003406	1	0.07385	1	2615		
5407963	1 Gal Can	L	0.82	6.8388	1	6.8388	1	0.925	1	2414		
5407967	20oz Sp Can	L	1.05	8.757	0.15625	1.368281	1	0.88	1	2722		VOC Fraction inherited with spreadsheet - none on MSDS
5413542	2 L Pl Btl	L	0.902	7.52268	0.528346	3.974576	0.75	0.6	0.77	2819		process test used to determine evap fraction; MSDS in 1997 TRI Notebook
* some values in the table are given by the manufacturer, others are calculated by unit conversion.												
Values in this table may be updated as appropriate.												
4467305	5 Gal Pail	L	0.9	7.506	5	35.5		0.649	1			
5455100	16 oz can	L	0.93	7.7562	0.129	1		0.85	1			

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Enya Wax
HF-4011

	%
resin	40
IPA	40
Toluene	20

full bottle	1950	
partial bottle	865	
amount used:	1085	
full bag	530	
empty bag	58	
beaker w/ stir bar	375	
Beaker w/ sb, sample	845	2
evaporated bag	53	
evaporated beaker	700	
washed bag		

Amount of solvent evaporated from empty bag:	5
Amount of solvent evaporated from empty beaker:	145
Total Amount of solvent in waste collected:	150

Amount of solvent used:	651
Amount of solvent emitted:	501
Percent emitted of amount used:	77%

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units

Units of Item Purchased by Month		1	2	3	4	5	6	7	8	9	10	11	12	
Part No. SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total consumption
*	Spraypaint *	2	9	3	7	16	20	5	15	5	19	14	1	116
5407103	Sealant Silicone White 10.3 OZ tube	0	0	0	0	5	1	0	3	0	4	-2	0	11
5407104	Sealant Rubber Silicone RTV GE #W102 cart	1	3	4	1	2	0	4	3	0	6	3	0	27
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	1	0	7	4	0	0	0	0	1	0	2	0	15
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	6	0	2	5	8	5	21	2	2	0	0	0	51
5407328	Cleaner Instant Contact #CRC-02016	6	1	2	9	1	0	19	0	0	11	6	6	61
5407330	Cleaner Dust Chaser Spray VWR# 21899-094	4	29	8	12	10	14	12	8	16	2	11	15	141
5407332	Cleaner Electric Motor KAR #65390-2	0	0	0	0	0	0	0	0	0	0	0	4	4
5407334	Stripper / Remover For Paint, Carbon &	0	0	0	0	0	0	0	0	0	0	2	0	2
	Safety-Kleen Premium Gold Solvent	34	34	26	34	34	60	68	0	60	43	34	26	453
5407376	Isopropyl Alcohol (IPA) 99%	11	10	13	12	12	12	12	12	14	12	12	13	145
5407408	Lubricant Spray Molykote 321R Dow-Corning	1	0	0	0	0	0	0	0	0	0	0	0	1
5407431	Lubricant CRC 3-36 #03005	15	29	12	22	16	24	16	10	4	26	0	20	194
5407433	Lubricant CRC 3-36 (Gallon Can)	4	0	0	0	2	1	1	0	0	2	0	0	10
5407435	Lube Teflon #79417	0	0	0	0	0	0	0	0	1	0	0	2	3
5407436	Lubricant Teflon Dry #79418	0	0	2	0	0	0	0	0	0	0	0	0	2
5407439	Cement Neoprene Turntable Covering Carbo	0	2	0	0	0	0	0	0	0	0	0	0	2
5407466	Skyliquid Wax for Enya, HF-3511	0	0	6	0	27	4	60	38	27	4	0	0	166
5407470	Cleaner Zero Residue Instant Teck Spray	1	10	11	0	2	0	8	0	0	0	5	2	39
5407938	Caviclean #2 Cleaning Solution Turco	0	1	1	1	1	0	0	0	0	0	0	0	4
5407947	Lubricant Silicon	0	0	1	0	1	0	0	0	0	0	0	0	2
5407948	Grease Multi Purpose White	0	0	0	0	0	0	0	0	0	2	0	0	2
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	8	7	5	6	11	3	3	2	4	5	7	5	66
5407956	Hardner AD1211-B Red Pigment	8	5	5	3	9	4	5	3	3	6	8	5	64
5407957	Epoxy STC Fast Cure Grey	157	162	166	360	212	160	167	121	200	180	200	180	2265
5407963	Mold-Release Wiz F-57NC 1 Gallon	0	1	0	0	0	0	0	0	0	0	0	0	1
5407967	Adhesive Tixo K-10 10 Gm/Each	1	0	0	1	0	1	2	0	0	0	1	0	6
5413542	Skyliquid Wax for Enya, HF-4011	396	411	440	367	366	416	210	142	188	252	274	214	3676
* this category contains part numbers 5406902-4 and 5406906-12														
5406902	Paint Krylon White Enamel Glossy #1501	0	1	0	0	0	0	0	5	0	7	1	0	14
5406903	Paint Gray Primer 2X982 16oz.	0	0	0	0	3	12	0	3	1	3	4	0	26
5406904	Paint Supercoat 316L SS Aerosol Can	0	0	0	0	1	0	0	6	0	0	0	0	7
5406906	Paint John Deere Green	0	3	0	0	5	4	1	0	0	0	0	0	13
5406907	Paint Chevrolet Orange	0	0	0	0	0	0	1	0	0	7	0	0	8
5406908	Paint Ford Red	0	0	0	0	1	2	0	0	2	0	0	0	5
5406909	Paint High Heat Black	0	2	1	2	1	0	1	1	0	1	3	0	12
5406910	Paint Chrysler Blue/ Napa	0	2	0	0	0	2	0	0	0	0	5	1	10
5406911	Paint Tan Industrial Enamel	0	0	0	0	0	0	0	0	0	0	0	0	0
5406912	Paint Glossy Black Spray Can #84000	2	1	2	5	5	0	2	0	2	1	1	0	21
These items do not exist in SAP system. These are old warehouse numbers														
4467305	Adhesive	0	0	0	0									
5455100	Plasti-Dip	0	0	0	0									

SCOEPA00022963

Wacker Siltronic

Report ZMR00031 — Annual Chemical Usage Review — Date: 1/6/99 — Time: 9:48:31

Material Number	Stock	Material Group	Total Consumpti	Unit of Measure
5406902	17	685	14	CAN

PAINT Krylon white enamel glossy

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	1	0	0	0	0	0	5	0	7	1	0

5406903	10	685	26	CAN

PAINT gray primer 2X982 16 OZ.

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	3	12	0	3	1	3	4	0

5406904	17	865	7	CAN

PAINT SUPERCOAT 316L SS AEROSOL CAN

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	1	0	0	6	0	0	0	0

5406905	7	685	0	CAN

VARNISH red insulating

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	0	0	0

5406906	3	685	13	EA

PAINT John Deere Green

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	3	0	0	5	4	1	0	0	0	0	0

5406907	4	685	8	EA

PAINT Chevrolet Orange

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	1	0	0	7	0	0

5406908 1 685 5 EA
PAINT Ford red

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	1	2	0	0	2	0	0	0

5406909 3 685 12 EA
PAINT high heat black

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	2	1	2	1	0	1	1	0	1	3	0

5406910 5 685 10 EA
PAINT Chrysler blue

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	2	0	0	0	2	0	0	0	0	5	1

5406911 5 685 0 EA
PAINT tan industrial enamel

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	0	0	0

5406912 2 685 21 CAN
PAINT glossy black spray can #84000

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
2	1	2	5	5	0	2	0	2	1	1	0

5407103 19 865 11 EA
SEALANT silicone white 10.3 OZ tube

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	5	1	0	3	0	4 2-		0

5407104 12 865 27 EA
SEALANT rubber silicone RTV GE#W102

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
1	3	4	1	2	0	4	3	0	6	3	0

5407107 7 865 15 CAN
SILICONE RTV HIGH TEMP BLUE MAK-A-GASKET

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
1	0	7	4	0	0	0	0	1	0	2	0

5407108 45 865 51 CAN
SILICONE RTV HIGH TEMP CLEAR MAK-A-GASKE

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
6	0	2	5	8	5	21	2	2	0	0	0

5407327 15 775 0 GAL
SPRAY CLEAN INDUSTRIAL BUTYL DE/DL 100

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	0	0	0

5407328 22 775 61 CAN
CLEANER instant contact #CRC-02016

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
6	1	2	9	1	0	19	0	0	11	6	6

5407330 28 775 141 CAN
CLEANER DUST CHASER SPRAY VWR# 21899-094

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
4	29	8	12	10	14	12	8	16	2	11	15

5407332 10 835 4 CAN
CLEANER electric motor KAR #65390-2

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	0	0	4

5407334 0 835 2 CAN
STRIPPER/REMOVER PAINT, CARBON & GASKETS

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	0	2	0

5407347 13 775 7 DR

REFRIGERANT R-22 (30 LBS)

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	1	0	3	0	1	0	0	2	0

5407356 3 705 0 CS

STRIPPER PHOTORESIST #843987

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	0	0	0

5407374 0 835 0 DR

ETHANOL V-1 200 (VANZOL)

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	0	0	0

5407375 0 835 0 DR

ACETONE

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	0	0	0

5407376 3 835 145 DR

ISOPROPYL ALCOHOL (IPA) 99%

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
11	10	13	12	12	12	12	12	14	12	12	13

5407408 4 595 1 EA

LUBRICANT spray Molykote 321R Dow-Cornin

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
1	0	0	0	0	0	0	0	0	0	0	0

5407431 32 595 194 EA

LUBRICANT CRC 3-36 16oz can

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
15	29	12	22	16	24	16	10	4	26	0	20

5407433 2 595 10 GAL

LUBRICANT CRC 3-36 (1 gallon)

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
4	0	0	0	2	1	1	0	0	2	0	0

5407435 2 595 3 CAN
LUBE teflon #79417

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	1	0	0	2

5407436 3 595 2 CAN
LUBRICANT teflon dry #79418

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	2	0	0	0	0	0	0	0	0	0

5407439 0 765 2 BTL
CEMENT NEOPRENE TURNTABLE COVERING CARBO

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	2	0	0	0	0	0	0	0	0	0	0

5407466 0 865 166 BTL FLAGGED FOR DELETION
WAX SKYLIQUID CLEAR HF3511 2 LITER

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	6	0	27	4	60	38	27	4	0	0

5407470 9 710 39 CAN
CLEANER zero residue instant tech spray

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
1	10	11	0	2	0	8	0	0	0	5	2

5407938 0 775 4 DR FLAGGED FOR DELETION
CAVICLEAN #2 CLEANING SOLUTION TURCO

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	1	1	1	1	0	0	0	0	0	0	0

5407947 8 595 2 CAN
LUBRICANT SILICON

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98

0	0	1	0	1	0	0	0	0	0	0	0

5407948 9 595 2 EA
GREASE MULTI PURPOSE WHITE

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	2	0	0

5407955 7 765 66 CS
EPOXY VALTRON AD1230 4-1 GAL/CS PART A

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
8	7	5	6	11	3	3	2	4	5	7	5

5407956 7 765 64 CS
HARDNER AD1211-B RED PIGMENT

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
8	5	5	3	9	4	5	3	3	6	8	5

5407957 180 765 2,265 CAN
EPOXY fast cure grey

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
157	162	166	360	212	160	167	121	200	180	200	180

5407963 3 765 1 CAN
MOLD-RELEASE WIZ F-57NC 1 GALLON

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	1	0	0	0	0	0	0	0	0	0	0

5407964 3 765 0 CAN
MOLD-CLEANER CLEANWIZ 9 1 GALLON

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
0	0	0	0	0	0	0	0	0	0	0	0

5407967 3 765 6 CAN
ADHESIVE all purpose & trim #77160

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
1	0	0	1	0	1	2	0	0	0	1	0

5413542	316	865	3,676 BTL

WAX SKYLIQUID CLEAR HF4011 2 LITER

Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
396	411	440	367	366	416	210	142	188	252	274	214

Analytical data from North Creek Analytical
(reports from Dianne Mullan/Facilities Lab)

OWW IPA		
Date	Detection Limit	Result (ppm)
4-Jun	10.0	ND
9-Jul	10.0	ND
6-Aug	10.0	20.8
3-Sep	10.0	ND
1-Oct	10.0	ND
12-Nov	10.0	12.4
3-Dec	10.0	ND
Average:		8.3

	Million Gallons	
Month	CE Flow	OWW Flow
Jan	22.289	22.449
Feb	22.26	20.116
Mar	26.226	21.55
Apr	25.23	21.091
May	25.978	20.313
Jun	17.07	20.165
Jul	24.552	21.698
Aug	24.552	16.975
Sep	23.28	18.087
Oct	24.242	18.388
Nov	25.77	19.108
Dec	25.792	19.825
Total	287.241	239.765

OWW = Organic Waste Water
CE = Combined Effluent from DMRs (Weak Acid Drain + Concentrated Acid Drain)
ppm = mg/l
ND = Not Detected

POTW Flow: (OWW system)
239765000 gallons for the year
19980416.7 per month, assuming flow is consistent

River Flow: (CE)
287241000 gallons for the year
23936750 per month, assuming flow is consistent

calculating yearly amount of IPA to POTW:

$$\frac{8.3 \text{ gal IPA}}{1000000 \text{ gal water}} \times \frac{239765000 \text{ gal water}}{\text{year}} \times \frac{6.59 \text{ lb IPA}}{\text{gal IPA}} = \frac{13137 \text{ lb IPA}}{\text{year}}$$

13137 lb IPA / year to waste water

::
Total lb VOC in waste water for 1998: 13137 or 6.6 tons

SCOEPA00022971

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ▪ (425) 481-9200 ▪ FAX 485-2992
SPOKANE ▪ (509) 924-9200 ▪ FAX 924-9290
PORTLAND ▪ (503) 906-9200 ▪ FAX 906-9210

Wacker Siltronics Corporation	Project:	98-72/73/74/75	Sampled: 6/4/98
7200 N.W. Front	Project Number:	none	Received: 6/4/98
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 6/26/98 10:12

Alcohols by GC/FID Headspace Analysis
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
98-75			**P806086-04**				**Water**	
Isopropanol OWW grabb	0680166	6/5/98	6/5/98	EPA 8015	10.0	ND	mg/l	

North Creek Analytical, Inc.

Refer to end of report for text of notes and definitions.

Mary A. Fritzmann Smith, Project Manager

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

SCOEPA00022972

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ▪ (425) 420-9200 ▪ FAX 420-9210
SPOKANE ▪ (509) 924-9200 ▪ FAX 924-9290
PORTLAND ▪ (503) 906-9200 ▪ FAX 906-9210

Wacker Siltronics Corporation	Project:	None	Sampled: 7/9/98
7200 N.W. Front	Project Number:	98-86,87,88	Received: 7/9/98
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 7/29/98 10:54

Alcohols by GC/FID Headspace Analysis
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
98-88			**P807192-03**				**Water**	
Isopropanol	0780324	7/14/98	7/14/98	EPA 8015	10.0	ND	mg/l	

SCOEPA00022973

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ▪ (425) 420-9200 ▪ FAX 420-9210
SPOKANE ▪ (509) 924-9200 ▪ FAX 924-9290
PORTLAND ▪ (503) 906-9200 ▪ FAX 906-9210

Wacker Siltronics Corporation	Project:	None	Sampled: 8/6/98
7200 N.W. Front	Project Number:	98-95,96,97	Received: 8/6/98
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 8/26/98 09:19

Alcohols by GC/FID Headspace Analysis
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
98-97 OWW grab			P808096-03				Water	
Isopropanol	0880440	8/19/98	8/20/98	EPA 8015	10.0	**20.8**	mg/l	

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ▪ (425) 420-9200 ▪ FAX 420-9210
SPOKANE ▪ (509) 924-9200 ▪ FAX 924-9290
PORTLAND ▪ (503) 906-9200 ▪ FAX 906-9210

Wacker Siltronics Corporation	Project:	None Provided	Sampled: 9/3/98
7200 N.W. Front	Project Number:	None Provided	Received: 9/3/98
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 10/30/98 11:34

Alcohols by GC/FID Headspace Analysis
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
98-113 cww, grab			**P809058-03**				**Water**	
Isopropanol	1080463	10/18/98	10/18/98	EPA 8015	10.0	ND	mg/l	

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ▪ (425) 420-9200 ▪ FAX 420-9210
SPOKANE ▪ (509) 924-9200 ▪ FAX 924-9290
PORTLAND ▪ (503) 906-9200 ▪ FAX 906-9210

Wacker Siltronics Corporation	Project:	none given	Sampled: 10/1/98
7200 N.W. Front	Project Number:	none	Received: 10/1/98
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 10/30/98 12:15

Alcohols by GC/FID Headspace Analysis
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
98-121 OWW, grab			**P810013-03**				**Water**	
Isopropanol	1080463	10/18/98	10/18/98	EPA 8015	10.0	ND	mg/l	

Rec: 11/30/98
DM

Wacker Siltronics Corporation	Project:	Storm Water	Sampled: 11/10/98 to 11/12/98
7200 N.W. Front	Project Number:	Fall -98	Received: 11/12/98
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 11/30/98 11:39

Alcohols by GC/FID Headspace Analysis
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
98-133 CWW, grab			P811235-06				Water	
Ethanol	1180461	11/17/98	11/17/98	EPA 8015	10.0	ND	mg/l	
Isopropanol	"	"	"	EPA 8015	10.0	12.4	"	
Methanol	"	"	"	EPA 8015	10.0	ND	"	

SCOEPA00022977

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL • (425) 420-9200 • FAX 420-9210
SPOKANE • (509) 924-9200 • FAX 924-9290
PORTLAND • (503) 906-9200 • FAX 906-9210

Wacker Siltronics Corporation	Project:	none given	Sampled: 12/3/98
7200 N.W. Front	Project Number:	none	Received: 12/3/98
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 1/27/99 10:54

Alcohols by GC/FID Headspace Analysis
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
28-145 OWO-grab-			P812062-02				Water	
Isopropanol	1280148	12/7/98	12/8/98	EPA 8015	10.0	ND	mg/l	

North Creek Analytical, Inc.

Refer to end of report for text of notes and definitions.

Crystal Burkholder, Project Manager

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

SCOEPA00022978

Date	CCD Fwd sump flw Avg. gpm (BG)	CCD Fwd sump flw Estimated gallons per month	OWW Effluent flw Avg. gpm (AU)	OWW Effluent flw Estimated gallons per month	CAD HYZ flow Avg. gpm (K)	SWW Fwd sump flw Avg gpm (BK)	CAD - SWW (CAD Actual) gpm	CAD Effluent flow Estimated gallons per month
Jan-98	1.69	75,442	502.89	22,449,010	202.11			
Feb-98	1.70	68,544	498.91	20,116,051	276.27	73.04	203.23	8,194,234
Mar-98	1.88	83,923	482.76	21,550,406	274.79	73.95	200.84	8,965,498
Apr-98	1.48	63,936	488.21	21,090,672	262.89	69.96	192.93	8,334,576
May-98	1.63	72,763	455.05	20,313,432	269.19	68.41	200.78	8,962,819
Jun-98	1.43	61,776	466.78	20,164,896	279.87	71.43	208.44	9,004,608
Jul-98	1.92	85,709	486.06	21,697,718	261.35	70.42	190.93	8,523,115
Aug-98	1.58	70,531	380.26	16,974,806	257.87	53.94	203.93	9,103,435
Sep-98	1.45	62,640	418.67	18,086,544	221.17	32.31	188.86	8,158,752
Oct-98	2.03	90,619	411.92	18,388,109	226.97	30.88	196.09	8,753,458
Nov-98	1.93	83,376	442.32	19,108,224	244.35	36.25	208.10	8,989,920
Dec-98	1.87	83,477	444.11	19,825,070	261.47	40.14	221.33	9,880,171

Annual Totals (gallons):	**902,736**	**239,764,939**		**96,870,586**
Amount to River (gallons):	**857,599**			
Amount to POTW (gallons):	**45,137**	**239,764,939**		**96,870,586**

1440 minutes per day

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Mixed Alcohols Waste				
Date	lbs	Avg lbs/day	Avg lbs/30 days	Avg lbs/month
5-Mar	413	0.01	0.35	156.37
7-May	413	6.56	196.67	
1-Oct	413	2.81	84.29	
6-Nov	413	11.47	344.17	
Total lbs:	1652			

lbs VOC: 1470 (Waste Profile Number: 321346)

Safety-Kleen Solvent Waste				
Date	lbs	Avg lbs/day	Avg lbs/30 days	Avg lbs/month
29-Jan	180.9	0.01	0.15	192.72
10-Feb	234.5			
26-Mar	227.8	8.26	247.66	
13-Apr	201	11.17	335.00	
5-May	167.5	7.61	228.41	
3-Jun	201			
17-Jun	147.4			
28-Jul	341.7	8.22	246.46	
11-Sep	127.3	2.83	84.87	
24-Sep	227.8			
27-Oct	180.9	8.88	266.54	
17-Nov	227.8	10.85	325.43	
4-Dec	154.1	9.06	271.94	
Total lbs:	2619.7			

lbs VOC: 2620 (Safety-Kleen Premium Gold Solvent)

Wax Waste (from Fab 2 - Enya)				
Date	lbs	Avg lbs/day	Avg lbs/30 days	Avg lbs/month
6-Feb	1142	0.03	0.96	812.09
5-Mar	1429	52.93	1587.78	
2-Apr	977	34.89	1046.79	
7-May	1468	41.94	1258.29	
4-Jun	1042	37.21	1116.43	
30-Jun	1162	44.69	1340.77	
6-Aug	882	23.84	715.14	
3-Sep	363	12.96	388.93	
1-Oct	326	11.64	349.29	
6-Nov	681	18.92	567.50	
3-Dec	505	18.70	561.11	
Total lbs:	9977			

lbs VOC: 5986.2 (Waste Profile Number: 325054)

Total lbs VOC in waste shipments for 1998:	10076	or	5.0 tons	
	4090	or	2.0 tons	(not including Wax Waste)
	1470	or	0.7 tons	(cleaning solvent VOCs only, not including Safety-Kleen)

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Date	Manifest Number	Waste Stream	Process Generating Waste	Where waste is generated	Profile Number	Waste Code(s)	Receiving Facility	DEQID Number	Mgmt. Code	UM	Quantity	Density	Lbs	Haz?	Comments
1/7/98	80025	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0(	Romic	CAD009452657	M043	lb	3,160	6.58	3,160	Y	Generated in 1997 (included in 1997 Annual Waste Report). 16 x 55 gallon drums
1/7/98	80025	Used Oil			201495	None	Romic	CAD009452657	M061/M	gl	600			N	Generated in 1997 (included in 1997 Annual Waste Report)
1/7/98	80025	Alcohol mixture	IPA drum bottoms, wax waste, spent cleaning and off-spec material	Fab 1. D-125	321346	D001	Romic	CAD009452657	M051	gl	110	7.51	826	Y	Generated in 1997 (included in 1997 Annual Waste Report)
1/29/98	84137	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓ 27	6.7	181	N	N
2/6/98	80172	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0(	Romic	CAD009452657	M043	lb	1142		1,142	Y	Two 55 gallon drums, 4 30 gallon drums
2/6/98	80172	Lead Acid Batter	Spent Batteries	ERT, Maintenanc	323130	None	Romic	CAD009452657	M141/M	lb	15		15	N	Universal Waste
2/6/98	80172	Ni-Cad Batteries	Spent Batteries	ERT, Maintenanc	323131	None	Romic	CAD009452657	M141/M	lb	50		50	N	Universal Waste
2/6/98	80172	Used Oil			306571	None	Romic	CAD009452657	M061/M	gl	330			N	Vacuum pump oil
2/10/98	83102	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓ 17	6.7	114	N	
2/10/98	83053	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓ 18	6.7	121	N	
3/5/98	84026	Alcohol mixture	IPA drum bottoms, wax waste, spent cleaning and off-spec material	Fab 1. D-125	321346	D001	Romic	CAD009452657	M051	gl	55	7.51	413	Y	
3/5/98	84026	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0(	Romic	CAD009452657	M043	lb	1429		1,429	Y	Seven 30 gallon drums
3/5/98	84026	Partially full spra	Aerosol containers with paint, cleaners, adhesives, etc.	Miscellaneous	328034	D001+G3	Romic	CAD009452657	M061/M	lb	25		25	Y	
3/5/98	84026	Used Oil			201495	None	Romic	CAD009452657	M061/M	gl	165			N	
4/2/98	84192	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0(	Romic	CAD009452657	M043	lb	977		977	Y	Five 30 gallon drums
4/2/98	84192	Lead Acid Batter	Spent Batteries	ERT, Maintenanc	323130	None	Romic	CAD009452657	M141/M	lb	65		65	N	Universal Waste
4/2/98	84192	Ni-Cad Batteries	Spent Batteries	ERT, Maintenanc	323131	None	Romic	CAD009452657	M141/M	lb	50		50	N	Universal Waste
4/2/98	84192	Used Oil			306571	None	Romic	CAD009452657	M061/M	gl	110			N	Vacuum pump oil
4/9/98	98132	Chrome Sludge	WW treatment. Quality etching of waters and ingots.	Fab 1	J81268	D007	CWM	ORD089452353	M111	lb	2700		2,700	Y	
4/9/98	98132	Antimony Dust			H58893	None	CWM	ORD089452353		lb	2000		2,000	N	
4/9/98	98133	Lab Pack			CJ5807	None	CWM	ORD089452353	M041	lb	400		400	N	See packing slip for complete inventory of materials.
4/9/98	98134	Lab Pack			408121	D001, D0	CWM	COD980591184	M041	gl	10			Y	See packing slip for complete inventory of materials.
4/9/98	98134	Lab Pack			408121	D001. D035, U154, U		COD980591184	M041	gl	5			Y	See packing slip for complete inventory of materials.
4/9/98	98134	Lab Pack			408121	D001, D0	CWM	COD980591184	M041	gl	20			Y	See packing slip for complete inventory of materials.
4/9/98	98134	Lab Pack			408121	None	CWM	COD980591184	M041	gl	5			N	See packing slip for complete inventory of materials.
4/9/98	98134	Lab Pack			408121	D002	CWM	COD980591184	M041	gl	5			Y	See packing slip for complete inventory of materials.
4/9/98	98134	Lab Pack			408121	D002	CWM	COD980591184	M041	gl	5			Y	See packing slip for complete inventory of materials.
4/9/98	98134	Lab Pack			408121	D002	CWM	COD980591184	M041	gl	55			Y	See packing slip for complete inventory of materials.
4/9/98	98134	Lab Pack			408122	D009	CWM	COD980591184	M041	lb	100		100	Y	See packing slip for complete inventory of materials.
5/5/98	98213	Chrome Sludge	WW treatment. Quality etching of waters and ingots.	Fab 1	J81268	D007	CWM	ORD089452353	M111	lb	500		500	Y	
5/5/98	50598	Lab Pack			408183	D001	CWM	COD980591184	M041	gl	15			Y	See packing slip for complete inventory of materials.

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1998 Waste Shipments

5/5/98	50598	Lab Pack			408183	D001	CWM	COD980591184	M041	gl	55			Y	See packing slip for complete inventory of materials.
5/5/98	50598	Lab Pack			408183	None	CWM	COD980591184	M041	lb	200			N	See packing slip for complete inventory of materials.
5/7/98	84250	Partially full spra	Aerosol containers with paint, cleaners, adhesives, etc.	Miscellaneous	328034	D001	Romic	CAD009452657	M061/M	lb	60		60	Y	
5/7/98	84250	Alcohol mixture	IPA drum bottoms, wax waste, spent cleaning and off-spec material	Fab 1. D-125	321346	D001	Romic	CAD009452657	M051	gl	55	7.51	413	Y	
5/7/98	84250	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0	Romic	CAD009452657	M043	lb	1468		1,468	Y	8, 30 gallon drums
5/7/98	84250	Used Oil			201495	None	Romic	CAD009452657	M061/M	gl	330			N	
5/5/98	84233	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓25	6.7	168	N	
6/2/98	98300	Diesel Fuel	Old product (left ir	Fab 1	VIP408262	D001	CWM	COD980591184	M041	lb	10		10	Y	
6/2/98	98300	Lab Pack	Rags and PPE cc	Miscellaneous	VIP408262	D002	CWM	COD980591184	M041	lb	5		5	Y	
6/2/98	98300	Lab Pack	Filters and rags c	Miscellaneous	VIP408262	D002	CWM	COD980591184	M041	lb	5		5	Y	
6/2/98	98301	Chrome Sludge	WW treatment. Quality etching of waters and ingots.	Fab 1	J81268	D007	CWM	ORD089452353	M111	lb	400		400	Y	
6/2/98	98301	Propolyene Glyc	Old, spent produc	Facilities Mainten	CJ5184	None	CWM	ORD089452353		gl	800			N	
6/2/98	98302	Piping, equipme	Dissassembly	Fab 2 (Darren Ca	RL489500	None	CWM	ORD089452353		lb	400			N	
6/3/98	84497	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓15	6.7	101	N	
6/4/98	84308	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0	Romic	CAD009452657	M141/M	lb	1042		1,042	Y	
6/4/98	84308	Lead Acid Batter	Spent Batteries	ERT, Maintenanc	323130	None	Romic	CAD009452657	M141/M	lb	40		40	N	Universal Waste
6/4/98	84308	Used Oil			201495	None	Romic	CAD009452657	M061/M	gl	55			N	
6/30/98	84341	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0	Romic	CAD009452657	M043	lb	1162		1,162	Y	4, 30 gallon drums and 1, 55 gallon drum
6/30/98	84341	Mercury and DI \	Cleaning		340861	D009	Romic	CAD009452657	M078 -	lb	2		2	Y	
6/30/98	84341	Mercury Contam	From EPI measurement equipment.	Fab 1 and Fab 2	300390	D009	Romic	CAD009452657	M078 -	lb	2		2	Y	
6/30/98	84341	Used Oil			201495	None	Romic	CAD009452660	M061/M	gl	235			N	
6/30/98	84341	Lead Acid Batter	Spent Batteries	ERT, Maintenanc	323130	None	Romic	CAD009452657	M141/M	lb	25		25	N	Universal Waste
6/30/98	84341	Ni-Cad Batteries	Spent Batteries	ERT, Maintenanc	323131	None	Romic	CAD009452657	M141/M	lb	20		20	N	Universal Waste
7/7/98	98355	Chrome Sludge	WW treatment. Quality etching of waters and ingots.	Fab 1	J81268	D007	CWM	ORD089452353	M111	lb	1091		1,091	Y	
7/7/98	98355	Antimony Dust			H58893	None	CWM	ORD089452353		lb	400		400	N	One (55 gallon) poly drum
7/7/98	98355	Antimony Dust			H58894	None	CWM	ORD089452353		lb	1200		1,200	N	Three (55 gallom) steel drums
7/7/98	98356	Lab Pack	Dry magnesium perchlorate and sodium hydroxide		408328	D001	CWM	COD980591184	M041	lb	10		10	Y	
7/7/98	98356	Lab Pack	HCL contaminated materials		408328	D002	CWM	COD980591184	M041	lb	20		20	Y	
7/7/98	98356	Lab Pack	Sodium hydroxide contaminated materials		408328	D002	CWM	COD980591184	M041	lb	20		20	Y	
8/4/98	98600	Lab Pack	Gas purifing tubes containing organiometallic polymer, zinc compounds Sreactive)		408500	D003	CWM	COD980591184	M041	lb	5		5	Y	
8/4/98	98600	Lab Pack	Misc. spent chemicals		408500	D002	CWM	COD980591184	M041	lb	10		10	Y	
8/6/98	47771	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0	Romic	CAD009452657	M043	lb	882		882	Y	Five 30 gallon drums
8/6/98	47771	Used Oil			201495	None	Romic	CAD009452657	M061/M	gl	275			N	
9/3/98	47830	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0	Romic	CAD009452657	M043	lb	363		363	Y	Two 30 gallon drums
9/3/98	47830	Used Oil			201495	None	Romic	CAD009452657	M061/M	gl	110			N	
9/11/98	28162	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓19	6.7	127	N	
9/24/98	28156	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓18	6.7	121	N	
9/24/98	28157	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓16	6.7	107	N	

6/13/98 Safety-Kleen 22 gal

6/3/98 Safety-Kleen 15 gal (2nd shipment)
7/28/98 " 16 + 20 + 15 gal = 51 gal

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10/1/98	47948	Alcohol mixture	IPA drum bottoms, wax waste, spent cleaning and off-spec material	Fab 1. D-125	321346	D001	Romic	CAD009452657	M051	gl	55	7.51	413	Y	
10/1/98	47948	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0(	Romic	CAD009452657	M043	lb	326		326	Y	Two 30 gallon drums
10/1/98	47948	Used Oil			201495	None	Romic	CAD009452657	M061/M	gl	110			N	
10/27/98	28130	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓ 27	6.7	181	N	
11/3/98	98577	Chrome Sludge	WW treatment. Quality etching of waters and ingots.	Fab 1	J81268	D007	CWM	ORD089452353	M111	lb	1076		1076	Y	
11/3/98	98578	Lab Pack	From Lab. Mixture of methylene chloride, Tergitol, potassium chloride, ammonium thiocyanate and Cobalt nitrate.	Fab 1	419710	F002	CWM	COD980591184		lb	10		10	Y	See packing slip for complete inventory of materials.
11/3/98	98578	Lab Pack	Empty mercury flask. May contain residual material.	Fab 1	419709	D009	CWM	COD980591184		lb	5		5	Y	See packing slip for complete inventory of materials.
11/6/98	98634	Alcohol mixture	IPA drum bottoms, wax waste, spent cleaning and off-spec material	Fab 1. D-125	321346	D001	Romic	CAD009452657	M051	gl	55	7.51	413	Y	Four 30 gallon drums
11/6/98	98634	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0(	Romic	CAD009452657	M043	lb	681		681	Y	
11/6/98	98634	Used Oil			201495	None	Romic	CAD009452657	M061/M	gl	220			N	
11/6/98	47998	Lab Pack	Empty OMI-1 Indicator Tube. Previously contained lithium compound.	Fab 1	326646	None	Romic	CAD009452657		lb	1		1	N	See packing slip for complete inventory of materials.
11/9/98	61348	Old Product	Old Rodolene Premix. Could no longer be used or returned to vendor.		PCI98100 211LS	None	Pollution Control Industries (PCI)	IND000646943		gl	1210			N	
11/17/98	90517	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓ 17	6.7	114	N	
11/17/98	93314	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓ 17	6.7	114	N	
12/1/98	98634	Chrome Debris	Inert absorbant, equipment, ppe contaminated with chromic acid and residue	Fab 1	D43767	D007	CWM	ORD089452353		lb	50		50	Y	One 30 gallon drum
12/1/98	98635	Lab Pack	PPE Contaminated with Hydrofluoric and Hydrochoric Acids		434053	None	CWM	COD980591184		lb	5		5	N	See packing slip for complete inventory of materials.
12/3/98	98722	Wax from Enya	Polishing. Waste rags, wipes, debris and unused product (in plastic bottles).	Fab 2	325054	D001, F0(	Romic	CAD009452657	M043	lb	505		505	Y	Three 30 gallon drums
12/3/98	98722	Lead Acid Batter	Spent Batteries	ERT, Maintenanc	323130	None	Romic	CAD009452657	M141/M	lb	10		10	N	Universal Waste
12/3/98	98722	Used Oil			201495	None	Romic	CAD009452657	M061/M	gl	✓ 55			N	
12/4/98	7043	Safety Kleen Solvent				None	Safety Klee	ORD981766124		gl	✓ 23	6.7	23	N	
12/17/98	98671	Chrome Sludge	WW treatment. Quality etching of waters and ingots.	Fab 1	J81268	D007	CWM	ORD089452353	M111	lb	458		458	Y	
12/17/98	80988	Lab Pack	PPE Contaminated with Hydrofluoric and Hydrochoric Acids		434046	D002	CWM	COD980591184		lb	280		280	Y	See packing slip for complete inventory of materials.
12/17/98	80988	Lab Pack	Old Valktron adhesive		434046	None	CWM	COD980591184		lb	10		10	N	See packing slip for complete inventory of materials.

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Emissions from burning diesel fuel in emergency generators,
other internal combustion engines

AP-42 emission factors, Vol. I, Table 3.4-1 (as referenced on Page 3 of ACDP Application Review Report Attachment):

	g/hphr
Particulate	0.24
CO	2.4
NOx	11
SOx	1.1
VOCs	0.33

Values used in calculating emissions:

5.1	test usage, in hr
7	January shutdown usage, in hr
6.6	August shutdown usage, in hr
400	kW rated power (Generator #1)
536.4	hp, converted using 1.341 hp = 1 kW
0.25	typical load factor (power used/power rating)
0.6	load factor during shutdown

11.9	test usage, in hr
15	January and August shutdown usage, in hr (Generator #2)
12	August shutdown usage, in hr (Generator #3 - no January usage)
1000	kW rated power (Generator #2 and Generator #3)
1341	hp, converted using 1.341 hp = 1 kW
0.5	typical load factor (power used/power rating)
0.5	load factor during shutdown (Generator #2)
0.9	load factor during shutdown (Generator #3)

The equation given by AP-42 is: hr*hp*load factor*emission factor
This yeilds the following emission estimates:

	lb/year	tons/year
Particulate	20	0.010
CO	199	0.10
NOx	911	0.46
SOx	91	0.05
VOCs	27	0.01

Notes: Load factors based on conservative estimates of shutdown loads and preventative maintenance test loads.

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Emissions from burning diesel fuel in rental generators during August shutdown

AP-42 emission factors, Vol. I, Table 3.4-1 (as referenced on Page 3 of ACDP Application Review Report Attachment):

	g/hphr
Particulate	0.24
CO	2.4
NOx	11
SOx	1.1
VOCs	0.33

Values used in calculating emissions:

24	usage, in hr
75	kW rated power
100.575	hp, converted using 1.341 hp = 1 kW
0.25	load factor

38	usage, in hr
98	kW rated power
131.418	hp, converted using 1.341 hp = 1 kW
0.6	load factor

96	usage, in hr
125	kW rated power
167.625	hp, converted using 1.341 hp = 1 kW
0.65	load factor

46	usage, in hr
125	kW rated power
167.625	hp, converted using 1.341 hp = 1 kW
0.75	load factor

14	usage, in hr
225	kW rated power
301.725	hp, converted using 1.341 hp = 1 kW
0.65	load factor

32	usage, in hr
225	kW rated power
301.725	hp, converted using 1.341 hp = 1 kW
0.75	load factor

38	usage, in hr
250	kW rated power
335.25	hp, converted using 1.341 hp = 1 kW
0.65	load factor

62	usage, in hr
500	kW rated power
670.5	hp, converted using 1.341 hp = 1 kW
0.6	load factor

The equation given by AP-42 is: hr*hp*load factor*emission factor
This yeilds the following emission estimates:

	lb/year	tons/year
Particulate	33	0.017
CO	334	0.17
NOx	1529	0.76
SOx	153	0.08
VOCs	46	0.02

Notes: Load factors based on estimates of shutdown loads.

Total Emissions from Burning Diesel in 1998

	lb/year	tons/year
Particulate	53	0.027
CO	532	0.27
NOx	2440	1.22
SOx	244	0.12
VOCs	73	0.04

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SOx emissions may be better estimated using purchased fuel information and sulfur balance.
Calculating for the fuel purchased in 1998 (L/S Diesel):

Given:	3231.1	gal L/S Diesel purchased;			994.2	gal Diesel #2 (1,220 gal purchased - 225.8 pumped and returned)	
This fuel contains:		maximum of	0.05	WT% sulfur;	0.375	WT% sulfur	
0.86	sp.gr.				0.86	sp.gr.	
8.34	lbs/galH2O						
7.1724	lbs/gal diesel		23174.7	lbs diesel	7.1724	7130.8001	lbs diesel
0.0035862	lbs sulfur/gal diesel		11.5874	lbs sulfur	0.0268965	26.7405	lbs sulfur

Assuming all the sulfur goes to SOx

Assuming SOx is:	0.00%	SO	then	64.1 =MW SOx
	100.00%	SO2		

then from the diesel fuel the SOx emissions were:

	32.1	MW sulfur, lbs/lbmol
gives	1.1940147	lbmol sulfur
which is	1.1940147	lbmol SOx
and equals	76.536341	lbs SOx emitted by the fuel
or	0.0382682	tons SOx

SCOEPA00022986

Rec'd
3-10-98

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ▪ (425) 481-9200 ▪ FAX 485-2992
SPOKANE ▪ (509) 924-9200 ▪ FAX 924-9290
PORTLAND ▪ (503) 643-9200 ▪ FAX 644-2202

March 2, 1998

Thomas Rothschild
Wacker Siltronics Corp.
7200 NW Front
Portland, OR 97210

Dear Tom:

Enclosed is the report for the Sulfur in Diesel analysis. The work was performed by Columbia Inspection, 7133 N. Lombard, Portland, OR 97203. NCA project # is P802245. If you have any questions please call.

Sincerely,

Mary A. Fritzmann Smith
Project Manager

SCOEPA00022987

CERTIFICATE OF ANALYSIS

CLIENT: NORTH CREEK ANALYTICAL
9405 SW NIMBUS AVENUE
BEAVERTON OR 97008

PHONE: (503) 643-9200
FAX: (503) 644-2202

DATE SUBMITTED: 02/13/98

PO#: 405748

PROJECT NAME: HIGH SULFUR DIESEL ANALYSIS

CI SAMPLE #	CLIENTS ID#	DATE	TIME	DESCRIPTION
980183-001-01	98-30	02/13/98	1350	HIGH SULFUR DIESEL SAMPLE
980183-002-01	98-31	02/13/98	1350	HIGH SULFUR DIESEL SAMPLE
980183-003-01	98-32	02/13/98	1355	HIGH SULFUR DIESEL SAMPLE

REPORT DATE: 02/17/98 REPORT NUMBER: 980183 PAGE: 1 OF 1

SAMPLE	ANALYSIS	PARAMETER	RESULT	UNIT	DETECTION LIMIT	ANALYST
HIGH SULFUR DIESEL SAMPLE 98-30						
980183-001-01	SULFUR, X-RAY ASTM D-4294	SULFUR	0.31	WT %	0.01	Abigail K.
HIGH SULFUR DIESEL SAMPLE 98-31						
980183-002-01	SULFUR, X-RAY ASTM D-4294	SULFUR	0.18	WT %	0.01	Abigail K.
HIGH SULFUR DIESEL SAMPLE 98-32						
980183-003-01	SULFUR, X-RAY ASTM D-4294	SULFUR	0.13	WT %	0.01	Abigail K.

REVIEWED BY: _____
Martin Little - Laboratory Manager

SCOEPA00022988

8.9

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508 (206) 481-9200 FAX 485-2992
East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 643-9200 FAX 644-2202

COPY

CHAIN OF CUSTODY REPORT

Work Order # P802245

REPORT TO: Wacker Siltronic	INVOICE TO: Wacker Siltronic
ATTENTION: Tom Rothschild	ATTENTION: Accts Payable.
ADDRESS: 7200 W. W. Front Ave Portland OR 97210	ADDRESS:
PHONE: 219-7374 FAX: 417-4141	P.O. NUMBER: 405748 NCA QUOTE #:
PROJECT NAME:	
PROJECT NUMBER:	
SAMPLED BY: Tom Rothschild	

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [10] Standard | 7 | 5 | 4 | 3 | 2 | 1 | Same Day

Fuels & Hydrocarbon Analyses: [5] Standard | 3-4 | X | 1 | Same Day

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)	Analysis Request: Sulfur % wt	MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
1.	98-30	2/13/98 1350		X	O	1	
2.	98-31	2/13/98 1350		X	O	1	
3.	98-32	2/13/98 1355		X	O	1	
4.							
5.							
6.							
7.							
8.							
9.							
10.							

RELINQUISHED BY (Signature): Thomas J. Rothschild	DATE: 2/13/98	RECEIVED BY (Signature):	DATE: 2-15-98
PRINT NAME: Thomas J. Rothschild FIRM: WACKER	TIME: 1430	PRINT NAME: Gary Spangler FIRM: NCA	TIME: 1430
RELINQUISHED BY (Signature):	DATE: 2-13-98	RECEIVED BY (Signature): CJ	DATE: 2/13/98
PRINT NAME: Gary Spangler FIRM: NCA	TIME: 1520	PRINT NAME: MARTIN LITTLE FIRM:	TIME: 1540

ADDITIONAL REMARKS:

PAGE OF

COC Rev 8, 1/96

SCOEPA00022989

Air Emissions Calculations for 1997

Emissions from burning natural gas

Natural gas usage:	
	10^6 cf
Jan	18.971
Feb	14.6
Mar	14.491
Apr	13.015
May	11.751
Jun	11.133
Jul	9.675
Aug	9.896
Sep	10.445
Oct	12.463
Nov	12.983
Dec	17.942
Total:	157.365

yellow shading indicates user input information

AP-42 emission factors, Vol. I, Table 1.4-1:			
Particulate	3	lbs/10^6 cf	(avg of 1 to 5 lb/10^6 cf)
CO	35	lbs/10^6 cf	
NOx	140	lbs/10^6 cf	
SOx	0.6	lbs/10^6 cf	
VOCs	5.8	lbs/10^6 cf	

Assuming all fuel fired equipment behaves according to AP-42,
we can calculate using the annual natural gas usage:

	lbs/year	tons/year
Particulate	472	0.24
CO	5507.8	2.8
NOx	22031	11
SOx	94	0.05
VOCs	913	0.46

::

SCOEPA00022990

NOx Scrubber Emissions for 1997							
	Jan	819.23					
	Feb	391.27					
	Mar	888.82					
	Apr	995.82					
	May	227.23					
	Jun	902.56					
	Jul	1043.64					
	Aug	820.65					
	Sep	816.38					
	Oct	789.69					
	Nov	427.26					
	Dec	302.57					
Pounds NOx:		8425.12					
Data logger Up time							
Total days:		369	(1/2/97 to 1/6/98)				
Days not operating:		24					
% operating time:		93%					
Estimating total emissions:							
		9011.215	lbs	or	4.5	tons	
Highlighted numbers are invalid data due to lack of appropriate data per CEM Manual, 1992							

SCOEPA00022991

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

November 25, 1997

Mr. Tom McCue
Wacker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Mr. McCue,

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on November 25, 1997. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria of less than 15% of the audit value or ± 5 ppm, whichever is higher. The accuracy of the NO CEM was calculated to be within 2%; and the accuracy of the NO_x CEM was calculated to be within 4%. Both analyzers met the relative accuracy requirement on either percentage or the ± ppm criteria.

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F. For the CGA, each monitor (NO and

SCOEPA00022992

NO_x) was challenged three times with three independent audit standards: one standard of compressed zero air, and two NIST or EPA Protocol 1 traceable cylinders of NO gas at concentrations equal to 55% and 77% of the instrument span. The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

If you have any questions, please contact us.

Sincerely,

David Broderick
HORIZON ENGINEERING

attachments: CGA Report
Field Data
Wacker CEM Data
Calibration Gas Certificates

CGA Report

Client	Wacker Siltronics	Period Ending Date	12/31/97
Plant name	Wacker Siltronics		
Source Unit No.	NOx scrubbing system outlet	Date of Audit	11/25/97
Audited by	David Broderick, Horizon Engineering		

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero	Audit Point 1	Audit Point 2	
Cylinder ID No.			XC006129B	CC53877	
Date of Certification			5/3/96	1/18/96	
Type of Certification			NIST-SRM	EPA-1	
Certified Audit Value			55.3	76.9	
% of Span Value			55%	77%	
CEMS Response Time	34 seconds				
Sampled for 2x response time, +					
CEMS Response Value	NO Analyzer / Model # CFA-311A Mfg# 568833012				**Time**
Run 1		-0.40	56.60	77.50	1054-1100
Run 2		-0.20	56.40	77.70	1107-1115
Run 3		-0.50	56.00	77.90	1129-1137
Average			56.33	77.70	
Accuracy, % difference			1.9%	1.0%	
Accuracy, difference, ppm			1.0	0.8	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	8	**12**
or,	ppm	**+/- 5**	+/- 5

CEMS Response Value	NOx Analyzer / Model # CFA-311A Mfg# 568833011				**Time**
Run 1		0.40	56.80	79.90	1054-1100
Run 2		1.90	58.80	80.90	1107-1115
Run 3		0.50	56.80	77.90	1129-1137
Average			57.47	79.57	
Accuracy, % difference			3.9%	3.5%	
Accuracy, difference, ppm			2.2	2.7	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	8	**12**
or,	ppm	**+/- 5**	+/- 5

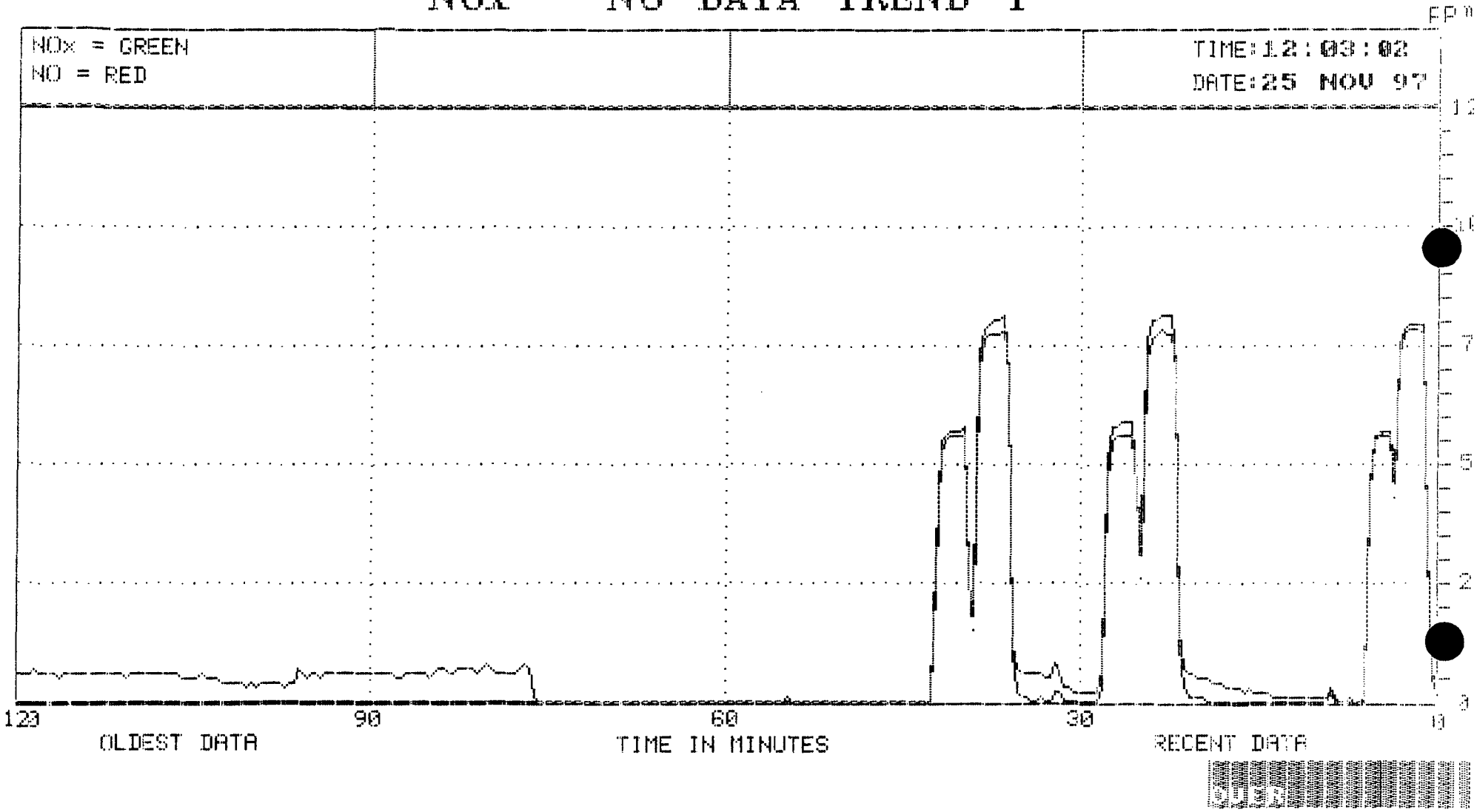
Comments

Heated Line Temp - 197 degrees F

Confirm Logbook Entry _____

SCOEPA00022994

NOx - NO DATA TREND 1



Data File Report - Last 60 Records
FORM NAME: MINLOG FILENAME: C:\LOGS\1MIN.D13 TYPE: DAILY
Page 1 Tue Nov 25 12:06:04 1997

RECO	DATE	TIME	LABEL	DATA	LABEL	DATA	LABEL	DATA	LABEL	DATA
665	11/25/97	11:04:42	NOx =	0	NO =	0	SCFM=	15601	TEMP=	70
666	11/25/97	11:05:43	NOx =	0	NO =	0	SCFM=	15601	TEMP=	70
667	11/25/97	11:06:42	NOx =	0	NO =	0	SCFM=	15549	TEMP=	70
668	11/25/97	11:07:42	NOx =	0	NO =	0	SCFM=	15601	TEMP=	70
669	11/25/97	11:08:41	NOx =	0	NO =	0	SCFM=	15654	TEMP=	70
670	11/25/97	11:09:41	NOx =	0	NO =	0	SCFM=	15654	TEMP=	70
671	11/25/97	11:10:41	NOx =	0	NO =	0	SCFM=	15601	TEMP=	70
672	11/25/97	11:11:40	NOx =	0	NO =	0	SCFM=	15601	TEMP=	70
673	11/25/97	11:12:41	NOx =	0	NO =	0	SCFM=	15601	TEMP=	70
674	11/25/97	11:13:42	NOx =	0	NO =	0	SCFM=	15601	TEMP=	70
675	11/25/97	11:14:41	NOx =	0	NO =	0	SCFM=	15654	TEMP=	70
676	11/25/97	11:15:41	NOx =	0	NO =	0	SCFM=	15601	TEMP=	70
677	11/25/97	11:16:40	NOx =	0	NO =	0	SCFM=	15654	TEMP=	71
678	11/25/97	11:17:40	NOx =	0	NO =	0	SCFM=	15601	TEMP=	71
679	11/25/97	11:18:41	NOx =	0	NO =	0	SCFM=	15654	TEMP=	71
680	11/25/97	11:19:40	NOx =	0	NO =	0	SCFM=	15601	TEMP=	71
681	11/25/97	11:20:40	NOx =	54	NO =	52	SCFM=	15601	TEMP=	71
682	11/25/97	11:21:39	NOx =	57	NO =	56	SCFM=	15601	TEMP=	71
683	11/25/97	11:22:40	NOx =	58	NO =	56	SCFM=	15601	TEMP=	71
684	11/25/97	11:23:41	NOx =	50	NO =	44	SCFM=	15601	TEMP=	71
685	11/25/97	11:24:39	NOx =	79	NO =	77	SCFM=	15601	TEMP=	71
686	11/25/97	11:25:40	NOx =	80	NO =	77	SCFM=	15601	TEMP=	72
687	11/25/97	11:26:39	NOx =	17	NO =	16	SCFM=	15601	TEMP=	72
688	11/25/97	11:27:39	NOx =	6	NO =	1	SCFM=	15601	TEMP=	72
689	11/25/97	11:28:40	NOx =	6	NO =	0	SCFM=	15549	TEMP=	72
690	11/25/97	11:29:39	NOx =	5	NO =	0	SCFM=	15601	TEMP=	72
691	11/25/97	11:30:39	NOx =	8	NO =	4	SCFM=	15601	TEMP=	72
692	11/25/97	11:31:38	NOx =	3	NO =	0	SCFM=	15601	TEMP=	72
693	11/25/97	11:32:38	NOx =	2	NO =	0	SCFM=	15601	TEMP=	72
694	11/25/97	11:33:39	NOx =	2	NO =	0	SCFM=	15601	TEMP=	72
695	11/25/97	11:34:38	NOx =	40	NO =	35	SCFM=	15601	TEMP=	72
696	11/25/97	11:35:39	NOx =	59	NO =	56	SCFM=	15549	TEMP=	72
697	11/25/97	11:36:37	NOx =	59	NO =	56	SCFM=	15496	TEMP=	72
698	11/25/97	11:37:38	NOx =	41	NO =	34	SCFM=	15601	TEMP=	72
699	11/25/97	11:38:38	NOx =	80	NO =	77	SCFM=	15496	TEMP=	72
700	11/25/97	11:39:37	NOx =	81	NO =	77	SCFM=	15496	TEMP=	72
701	11/25/97	11:40:38	NOx =	27	NO =	26	SCFM=	15601	TEMP=	72
702	11/25/97	11:41:38	NOx =	6	NO =	1	SCFM=	15549	TEMP=	72
703	11/25/97	11:42:38	NOx =	5	NO =	1	SCFM=	15601	TEMP=	72
704	11/25/97	11:43:37	NOx =	4	NO =	0	SCFM=	15601	TEMP=	72
705	11/25/97	11:44:39	NOx =	3	NO =	0	SCFM=	15549	TEMP=	72
706	11/25/97	11:45:37	NOx =	3	NO =	0	SCFM=	15496	TEMP=	72
707	11/25/97	11:46:37	NOx =	2	NO =	0	SCFM=	15496	TEMP=	72
708	11/25/97	11:47:36	NOx =	2	NO =	0	SCFM=	15549	TEMP=	72
709	11/25/97	11:48:37	NOx =	1	NO =	0	SCFM=	15549	TEMP=	72
710	11/25/97	11:49:36	NOx =	1	NO =	0	SCFM=	15601	TEMP=	72
711	11/25/97	11:50:36	NOx =	1	NO =	0	SCFM=	15601	TEMP=	73
712	11/25/97	11:51:36	NOx =	1	NO =	0	SCFM=	15496	TEMP=	73
713	11/25/97	11:52:36	NOx =	1	NO =	0	SCFM=	15549	TEMP=	73

RECO	DATE	TIME	LABEL	DATA	LABEL	DATA	LABEL	DATA	LABEL	DATA
714	11/25/97	11:53:37	NOx =	2	NO =	2	SCFM=	15549	TEMP=	73
715	11/25/97	11:54:36	NOx =	0	NO =	0	SCFM=	15496	TEMP=	73
716	11/25/97	11:55:37	NOx =	0	NO =	0	SCFM=	15496	TEMP=	73
717	11/25/97	11:56:36	NOx =	25	NO =	20	SCFM=	15496	TEMP=	73
718	11/25/97	11:57:37	NOx =	56	NO =	56	SCFM=	15496	TEMP=	73
719	11/25/97	11:58:36	NOx =	57	NO =	56	SCFM=	15496	TEMP=	73
720	11/25/97	11:59:35	NOx =	75	NO =	73	SCFM=	15549	TEMP=	73
721	11/25/97	12:00:36	NOx =	79	NO =	78	SCFM=	15549	TEMP=	73
722	11/25/97	12:01:34	NOx =	79	NO =	77	SCFM=	15496	TEMP=	73
723	11/25/97	12:02:35	NOx =	5	NO =	3	SCFM=	15496	TEMP=	73
724	11/25/97	12:04:36	NOx =	4	NO =	0	SCFM=	15496	TEMP=	73

SPECIALTY GA[illegible]EPARTMENT
23320 S. ALAM[illegible]A STREET
LONG BEACH, CA 90810

Certificate of Analysis - EPA Protocol Gas Standard

PERFORMED ACCORDING TO EPA TRACEABILITY PROTOCOL FOR ASSAY AND CERTIFICATION OF GASEOUS CALIBRATION STANDARDS (PROCEDURE #G1)

Customer:
AIR PRODUCT & CHEMICALS, INC.
940 S.E. 7TH AVE.
PORTLAND OR 97214-

Notes:

PO: 584728 Rel:

Order No: 591-088867-01
Batch No: 863-20983

Cylinder No: CC53877
Cylinder Pressure*: 2000 psig
Certification Date: 01/18/96
Expiration Date: 01/18/98

*** Certified Concentration *** ********* Reference Standards ********* ********** Analytical Instrumentation **********

Component	Certified Concentration	Cylinder #	Standard Number	Concentration	Instrument Make/Model	Serial Number	Last Calibration	Measurement Principal
NITRIC OXIDE	76.9 ±.47 PPM	SG909675ALB	GMIS	101.2000 PPM	BECKMAN/951A	0100722	12/13/95	CHEMILUMINESCENCE

Balance Gas: NITROGEN

Contaminent

Nitrogen Dioxide .400 PPM

---

* Standard should not be used below 150 psig

Analyst: Hebert Enriquez
HEBER ENRIQUEZ

Approved By: Anne M Ehlers
ANNE M EHLERS

#E3

#N2

BOC GASES

4715 N.E. 78th Street
Vancouver, WA 98665
Telephone: 360-695-1267
503-283-2561
FAX: 360-698-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5479
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted. 55 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC006129B Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	55 ppm	55.3 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By [signature]
Authorized Signature

Check for OFF SPEC result.

WHITE - Customer Copy

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

September 22, 1997

Mr. Eric Spiering
Wacker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Eric:

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on September 18, 1997. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria of less than 15% of the audit value or ± 5 ppm, whichever is higher. The accuracy of the NO CEM was calculated to be within 7.5% and 0.0% for audit points 1 and 2; respectively. The accuracy of the NO_x CEM was calculated to be 7.0% and 0.4% respectively. Both analyzers met the relative accuracy requirement on either percentage or the ± ppm criteria.
Test data was recorded in the Data Assessment Report in the Appendix.

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F. At the time of the testing, the 55 ppm

NO bottle was unavailable, so a 76.9 ppm EPA Protocol bottle was substituted for this test only.

For the CGA, each monitor (NO and NO_x) was challenged three times with three independent audit standards: one zero standard of N_2, and two NIST traceable cylinders of NO gas at concentrations equal to 27% and 77% of the instrument span. The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

Also, new test procedures have been implemented to avoid drying out the analyzers with calibration gas and causing the readings to be incorrect. I am very glad that the Horriba Representative was there at the time to explain the operation of the instrument and the negative interference that CO_2 and water vapor cause.

If you have any questions, please contact us.

Sincerely,

Kurt D. Torgerson

Kurt D. Torgerson
HORIZON ENGINEERING

SCOEPA00023001

attachments: Data Assessment Report
Field Data / Calculation sheet
Calibration Gas Certificates

SCOEPA00023002

Data Assessment Report

Client	Wacker Siltronic Corp	Period Ending Date	Sept 22, 1997
Plant name	Portland Campus		
Source Unit No.	NOx Scrubbing System Outlet	Date of Audit	09-18-97
Audited by	Kurt Torgerson, Horizon Engineering		

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero	Audit Point 1	Audit Point 2	
Cylinder ID No.		CC53833	CA03076	XC006129B	
Date of Certification			4/10/97	5/3/96	
Type of Certification			NIST-SRM	EPA-PROTO 1	
Certified Audit Value		0	25.65	76.9	
% of Span Value		0%	26%	77%	
CEMS Response Time	58 seconds				
Sampled for 2x response time, +					
CEMS Response Value	NO Analyzer / Model # CFA-311A Mfg# 568833012				**Time**
Run 1		3.10	27.40	76.70	1112
Run 2		3.40	27.70	76.90	1126
Run 3		3.00	27.60	77.10	1142
Average			27.57	76.90	
Accuracy, % difference			7.5%	0.0%	
Accuracy, difference, ppm			1.9	0.0	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	**12**
or,	ppm	**+/- 5**	+/- 5

CEMS Response Value	NOx Analyzer / Model # CFA-311A Mfg# 568833011				**Time**
Run 1		2.50	27.00	76.00	1113
Run 2		2.80	27.30	77.00	1126
Run 3		3.90	28.00	76.80	1142
Average			27.43	76.60	
Accuracy, % difference			7.0%	-0.4%	
Accuracy, difference, ppm			1.8	-0.3	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	**12**
or,	ppm	**+/- 5**	+/- 5

Comments

Heated Line Temp - 196 degrees F

Confirm Logbook Entry x

SCOEPA00023003

Relative Accuracy Field Data

Client WACKER - SILTRONIC
Date 9-18-97
Observer OLOM PHANANY
Response Time 60 SECS
Leak Check? ____
Source NOx SCRUBBER CEM
Location PORTLAND, OR
Horizon Personnel KDI - [signature]

Time :	Cyl. # /			1113	[illegible]	1126	1142											
Gas/ Range	Bottle Value	Instrument Response		Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8	Run 9	Run 10	Run 11	Run 12			Final Bias
NO	76.90		Start	76.7	76.9	/	77.1											
	25.65		Bias	27.4	27.7	/	27.6											
0- 100ppm	0.00			3.1	3.4	3.3	3.0											
			End															
			Bias															
Instrument Response			High															
			Mid															
			0															
NOx	76.90		Start	76.0	77.0	/	76.8											
	25.65		Bias	27.0	27.3	/	28.0											
0-100ppm	0.00			2.5	2.8	8.0	3.4											
			End															
			Bias															
Instrument Response			High															
			Mid															
			0															
			Start															
			Bias															
0-																		
			End															
			Bias															
			Start															
			End															
	Cal.	Time																
Instrument Response			High															
			Mid															
			0															

Notes:
HORRIBA INSTRUMENTS NDIR w/ MOLY CONVERTER. - NOTE RR #3 DUE TO DEHYDRATION OF CELL W/ MOISTURE
NEED DEWPOINT OF SAMPLE / REF @ 5.0°C

#N7

SCOTT-MARRIN, INC.
6531 BOX SPRINGS BLVD. • RIVERSIDE, CA 92507
TELEPHONE (909) 653-6780 • FAX (909) 653-2430

REPORT OF ANALYSIS
NIST TRACEABLE GAS MIXTURES

HENGØ1

TO:

DAVID ROSSMAN
HORIZON ENG'G/INFRARED NW
13585 NE WHITAKER WAY
PORTLAND, OR 97230-

DATE: Ø4/1Ø/97

CUSTOMER ORDER NUMBER: 1828

PAGE 1

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CYLINDER NUMBER	COMPONENT	CONCENTRATION(v/v)	NIST TRACEABLE REFERENCE STANDARD
CAØ3Ø76	Nitric oxide	25.65 ± Ø.26 ppm	SRM 2629a
	Nitrogen,O2-Free	Balance	
	NOx	25.65 ppm	

ppm = umole/mole   % = mole-%

The above analysis is traceable to the National Institute of Standards and Technology by intercomparison with the reference standard listed above.
Where indicated, volumetric and gravimetric reference standards are traceable thru use of our analytical balance, NIST Weight Report No. MMAP 232.09/202491.

Analyst: B.E. Gross   Approved: J.T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.

STANDARD CALIBRATION GASES IN ALUMINUM CYLINDERS

SCOEPA00023005

PECIALTY GA[illegible] EPARTMENT
3320 S. ALAM[illegible]A STREET
ONG BEACH, CA 90810

Certificate of Analysis - EPA Protocol Gas Standard

ERFORMED ACCORDING TO EPA TRACEABILITY PROTOCOL FOR ASSAY AND CERTIFICATION OF GASEOUS CALIBRATION STANDARDS (PROCEDURE #G1)

ustomer:
AIR PRODUCT & CHEMICALS, INC.
940 S.E. 7TH AVE.
PORTLAND OR 97214-

Notes:

Order No: 591-088867-01
Batch No: 863-20983

Cylinder No: CC53877
Cylinder Pressure*: 2000 psig
Certification Date: 01/18/96
Expiration Date: 01/18/98

584728 Rel:

** Certified Concentration ***		********* Reference Standards *********			********** Analytical Instrumentation **********			
omponent	Certified Concentration	Cylinder #	Standard Number	Concentration	Instrument Make/Model	Serial Number	Last Calibration	Measurement Principal
ITRIC OXIDE	76.9 ±.47 PPM	SG909675ALB	GMIS	101.2000 PPM	BECKMAN/951A	0100722	12/13/95	CHEMILUMINESCENCE

alance Gas: NITROGEN
ontaminent
itrogen Dioxide .400 PPM

---

* Standard should not be used below 150 psig

nalyst: Hebert Enriquez
HEBER ENRIQUEZ

Approved By: Anne M Ehlers
ANNE M EHLERS

#E3

SCOEPA00023006

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

SOURCE EVALUATION REPORT

WACKER SILTRONICS CORPORATION

NO_x Scrubber System Outlet
Total Nitrogen Oxides
CEMS Relative Accuracy Test

May 28, 1997

Prepared for

Deaver Environmental Group, Inc.
7900 S.W. Barnard Drive
Beaverton, OR 97007

by
David R. Broderick
&
David R. Rossman, P.E.

Expires 12/31/98

SCOEPA00023007

Introduction

Relative accuracy (RA) tests were made to confirm the accuracy of the continuous emission monitoring system (CEMS) for nitrogen oxides (NO_x), volume flow rate, and emission rate from the NO_x scrubber at Wacker Siltronics plant in Portland, Oregon.

The system was tested on May 28, 1997, to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for relative accuracy testing.

The field work was done by Horizon Engineering personnel David Broderick and Brian Fallon. Frank Deaver, of Deaver Environmental Group, Inc., arranged for the tests. Tom McCue was the site contact person at Wacker Siltronics and Eric Spiering coordinated plant operation and data acquisition.

Summary of Results

The results show that the NO_x monitoring system meets the performance standards in terms of the RA (maximum allowed difference) of less than 20%. Table 1 summarizes the results of the RA testing. Although the results of all runs in a set must be reported, the standards allow the use of the best nine runs in determining RA between the CEMS and the Reference Method (RM). The results were acceptable when all tests (11 tests were run) were used in the calculation or when the best nine tests were used.

Table 1
Relative Accuracy Test Results

NO_x Scrubber Outlet
Test Date: May 28, 1997

	Relative Accuracy All 11 Runs	Relative Accuracy Best 9 Runs
NO_x Concentration (ppmv)		
Actual difference	0.4	0.2
RA based on mean value (%)	5.7	4.9

	Relative Accuracy All 11 Runs	Relative Accuracy Best 9 Runs
Volume Flow Rate (dscf/min)		
Actual difference	1,010.4	941.6
RA based on mean value (%)	9.1	8.7

	Relative Accuracy All 11 Runs	Relative Accuracy Best 9 Runs
NO_x Emission Rate (lbm/hr)		
Actual difference	.07	.05
RA based on mean value (%)	9.2	7.9
RA allowable, based on mean value (%)	20	20

Average NO_x Emission Rate, lb/hr	1.3
Allowable NO_x Emission Rate, lb/hr*	5.4

* Permit limit cited is based on 130 lb/day for "wafer manufacturing process"

Description of the Source and its Operation

Air from the processes is pulled through three packed bed chemical scrubbers by a fan located upstream from the sampling port and downstream from the last scrubber. The liquid chemicals and gaseous NO_x/air mixture flow in different directions and have a high residence time in the scrubbers due to the packed beds. This residence time is sufficient to reduce the NO_x emissions well below Permit standards.

Sampling and Analytical Procedures

General The work was done according to guidelines of Performance Specification 2 (CFR 40, Pt. 60, Appendix B) for NO_x. EPA Reference Method 7E was used to determine NO_x with EPA Methods 1 and 2 and ODEQ Method 4 for determining the system flow rate. The RA testing consisted of eleven 23-minute sampling runs (21 minutes plus twice the response time of the system). The analyzer used was a TECO model 10A/R (chemiluminescent) run on the 0-250 ppm scale.

A probe was prepared for the testing by drilling holes at three points (16.7%, 50%, 83.3% of stack diameter) as specified in the method. Gas sample was drawn into an ice-water bath condenser (to remove moisture) by a Teflon lined sample pump and was pulled through a 75 ft. Teflon umbilical to the instrument van on the ground.

The NO_x analyzer was first calibrated with certified calibration gas. Then the entire sampling system was verified by introducing calibration gas near the sampling probe inlet. This bias check was conducted before and after every test run. The results of all calibrations are included in the Appendix.

Data The analyzer output was read every ten seconds during the tests by a Rustrak Ranger II data logger. Printouts of the plots from the data logger are in the Appendix.

After the completion of testing, data sets from the plant CEMS were generated and passed along to us by the Wacker technicians.

Calculations The data sets were compared using the formulas in Performance Specification 2. Results worksheets, in the Appendix, include calculations using all test data sets and are repeated using only the nine data sets that had the best agreement. The plant one-minute averages from Run 1 were printed out on the 500 ppm scale instead of the 100 ppm scale. As a result the average was 1/5 the actual value. For comparison we simply multiplied their data by 5.

Discussion

As noted, the results of the tests show that the NO_x CEMS is operating within the allowable specifications. All Reference Method instrument calibrations and all testing parameters were within specifications. Measured emissions for the 11 tests averaged 1.3 lb/hr. The Permit limit for the source is about 5.4 lb/hr (based on the daily allowable rate).

APPENDIX

Gases

- RA Results
- Wacker Siltronics Data
- Data Logger Plots
- Drift Corrections
- Calibration Documentation

Flow Rates

- Calculations
- Field Data

Calibration Gas Certificates

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

February 25, 1997

Mr. Tom McCue
Wacker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Mr. McCue:

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on February 25, 1997. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria of less than 15% of the audit value or ± 5 ppm, whichever is higher. The accuracy of the NO CEM was calculated to be 2.0% and -2.5% for audit points 1 and 2; respectively. The accuracy of the NO_x CEM was calculated to be 1.5% and -2.7% respectively. Test data was recorded in the Data Assessment Report in the Appendix.

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F.

For the CGA, each monitor (NO and NO_x) was challenged three times with three independent audit standards: one zero standard of N_2, and two NIST traceable cylinders of NO gas at concentrations equal to 26% and 55% of the instrument span. The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

If you have any questions, please contact us.

Sincerely,

HORIZON ENGINEERING

Joe D. Fiedler

Joe D. Fiedler

cc: Frank Deaver, Deaver Environmental Group
Eric Spiering, Wacker Siltronic

attachments: Data Assessment Report
CEMS Data
Calibration Gas Certificates

Data Assessment Report

Client	Deaver Environmental Group	Period Ending Date	
Plant name	Wacker Siltronics		
Source Unit No.	NOx scrubbing system outlet	Date of Audit	02/25/97
Audited by	Joe Fiedler, Horizon Engineering		

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero	Audit Point 1	Audit Point 2	
Cylinder ID No.			XC006159B	XC006129B	
Date of Certification			5/3/96	5/3/96	
Type of Certification			NIST-SRM	NIST-SRM	
Certified Audit Value			26.4	55.3	
% of Span Value			26%	55%	

CEMS Response Time	58 seconds
Sampled for 2x response time, +	

CEMS Response Value NO Analyzer / Model # CFA-311A Mfg# 568833012

		Zero	Audit Point 1	Audit Point 2	Time
Run 1		-0.60	27.50	54.70	1250-1300
Run 2		0.70	27.00	54.40	1300-1305
Run 3		0.50	26.30	56.20	1305-1310
Average			26.93	53.90	
Accuracy, % difference			2.0%	-2.5%	
Accuracy, difference, pp			0.5	-1.4	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	**+/- 5**	+/- 5

CEMS Response Value NOx Analyzer / Model # CFA-311A Mfg# 568833011

		Zero	Audit Point 1	Audit Point 2	Time
Run 1		0.70	27.90	54.30	1250-1300
Run 2		1.00	26.40	54.00	1300-1305
Run 3		0.90	26.10	53.10	1305-1310
Average			26.80	53.80	
Accuracy, % difference			1.5%	-2.7%	
Accuracy, difference, pp			0.4	-1.5	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	**+/- 5**	+/- 5

Comments

Heated Line Temp - 196 degrees F

Confirm Logbook Entry no*

*inadvertently not done

SCOEPA00023015

#N3

BOC GASES

4715 N.E. 78th Street
Vancouver, WA 98665
Telephone (360) 695-1351
503 283-2561
FAX 360-696-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5480
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted: 27 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC0061598 Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	27 ppm	26.4 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By _____
Authorized Signature

WHITE Customer Copy

08/17/96 4:25PM; Jetfax #001; Page 2
360 696 3975;
By: BOC VANCOUVER

SCOEPA00023016

#N2

BOC GASES

1715 N.E. 78th Street
Vancouver, WA 98665
Telephone: 360 695 1267
503-283-2561
FAX 360-696-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5479
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted. 55 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC0061298 Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	55 ppm	55.3 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By [signature]
Authorized Signature

Check for OFF SPEC result.

WHITE - Customer Copy

Pounds VOCs Purchased (1997)														
Part no SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly total
5406902	Spraypaint *	16.66	3.57	45.22	11.90	4.76	5.95	21.42	2.38	2.38	10.71	16.66	19.04	160.65
5406905	Varnish Red Insulating Grainger PN 10276	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407103	Sealant Silicone White 10.3 OZ tube	0.00	1.27	0.85	0.42	0.00	1.27	5.50	2.54	0.85	0.85	2.54	0.42	16.50
5407104	Sealant Rubber Silicone RTV GE #W102 cart	1.95	2.34	0.39	0.39	1.95	0.00	1.56	1.17	1.95	2.73	1.17	1.95	17.57
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.48
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	0.04	0.00	0.22	0.30	0.26	0.13	0.17	0.30	0.52	0.60	0.04	0.65	3.24
5407327	Spray Clean Industrial Butyl DE/DL 100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407328	Cleaner Instant Contact #CRC-02016	5.88	19.11	4.41	13.23	8.82	1.47	10.29	5.88	1.47	5.88	0.00	0.00	76.45
5407330	Cleaner Dust Chaser Spray VWR# 21899-094	13.98	1.16	15.14	31.45	23.29	13.98	11.65	20.96	19.80	3.49	19.80	20.96	195.66
5407332	Cleaner Electric Motor KAR #65390-2	0.00	15.91	2.65	0.00	5.30	0.00	0.00	0.00	2.65	0.00	0.00	1.33	27.85
5407334	Stripper / Remover For Paint, Carbon &	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.29	0.00	0.00	0.29	0.00	1.16
5407347	Refrigerant R-22 (30 lbs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407356	Stripper Photoresist #843987	34.68	0.00	17.34	0.00	0.00	0.00	0.00	0.00	26.01	0.00	0.00	0.00	78.03
5407374	Ethanol V-1 200 (Vanzol)	372.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	372.00
5407376	Isopropyl Alcohol (IPA) 99%	2840.00	2130.00	2130.00	4970.00	2130.00	3195.00	2840.00	3905.00	4260.00	4970.00	4260.00	4970.00	42600.00
5407408	Lubricant Spray Molykote 321R Dow-Corning	0.00	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	1.33
5407431	Lubricant CRC 3-36 #03005	8.34	7.75	4.77	10.13	2.38	11.92	10.72	1.19	14.30	0.00	11.32	14.89	97.71
5407433	Lubricant CRC 3-36 (Gallon Can)	0.00	0.02	0.02	0.01	0.02	0.03	0.00	0.03	0.00	0.01	0.00	0.01	0.15
5407435	Lube Teflon #79417	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03
5407436	Lubricant Teflon Dry #79418	0.00	0.00	0.00	0.00	1.59	0.00	0.53	0.00	0.00	0.00	0.00	0.00	2.13
5407439	Cement Neoprene Turntable Covering Carbo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.75
5407466	Skyliquid Wax for Enya	315.77	377.97	7.52	294.24	299.03	291.85	0.60	9.57	0.00	0.00	2.39	31.10	1630.04
5407470	Cleaner Zero Residue Instant Teck Spray	0.00	0.08	0.77	0.08	0.61	0.00	0.38	0.31	0.08	0.00	0.00	0.54	2.83
5407938	Caviclean #2 Cleaning Solution Turco	0.00	57.78	57.78	0.00	57.78	57.78	0.00	57.78	57.78	57.78	0.00	115.55	519.98
5407947	Lubricant Silicon	0.00	0.00	0.00	0.00	1.77	0.00	0.88	0.00	0.00	1.77	0.00	0.00	4.42
5407948	Grease Multi Purpose White	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.04
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	1.60	1.60	2.40	2.00	2.00	3.60	2.00	4.00	0.40	3.20	2.40	2.80	28.00
5407956	Hardner AD1211-B Red Pigment	2.75	1.38	2.75	2.75	1.83	4.13	3.21	3.21	1.83	2.75	3.67	2.29	32.56
5407957	Epoxy STC Fast Cure Grey	43.03	32.41	64.28	65.34	86.06	119.53	88.19	68.53	86.06	51.53	103.59	37.72	846.28
5407963	Mold-Release Wiz F-57NC 1 Gallon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407964	Mold-Cleaner Cleanwiz 9 1 Gallon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407967	Adhesive Tixo K-10 10 Gm/Each	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.80	0.00	2.40
5413542	Skyliquid Wax for Enya, HF-4011	0.00	0.00	0.00	0.00	0.00	416.24	447.34	724.84	574.13	760.72	825.31	858.80	4607.40
	Total Per Month:	3656.70	2652.60	2357.31	5402.51	2628.28	4122.86	3444.46	4807.98	5052.02	5872.85	5249.99	6078.07	

Total VOCs Purchased (1997): 51325.63 lbs or 25.66 tons

SCOEPA00023018

units

Units of Item Purchased by Month		1	2	3	4	5	6	7	8	9	10	11	12
Part No. SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
*	Spraypaint *	14	3	38	10	4	5	18	2	2	9	14	16
5406905	Varnish Red Insulating Grainger PN 10276	0	0	0	0	0	0	0	0	0	0	0	0
5407103	Sealant Silicone White 10.3 OZ tube	0	3	2	1	0	3	13	6	2	2	6	1
5407104	Sealant Rubber Silicone RTV GE #W102 cart	5	6	1	1	5	0	4	3	5	7	3	5
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	0	0	0	0	5	0	0	0	6	0	0	0
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	1	0	5	7	6	3	4	7	12	14	1	15
5407327	Spray Clean Industrial Butyl DE/DL 100	0	0	0	0	0	0	0	0	0	0	0	0
5407328	Cleaner Instant Contact #CRC-02016	4	13	3	9	6	1	7	4	1	4	0	0
5407330	Cleaner Dust Chaser Spray VWR# 21899-094	12	1	13	27	20	12	10	18	17	3	17	18
5407332	Cleaner Electric Motor KAR #65390-2	0	12	2	0	4	0	0	0	2	0	0	1
5407334	Stripper / Remover For Paint, Carbon &	0	0	0	0	2	0	0	1	0	0	1	0
5407347	Refrigerant R-22 (30 lbs)	0	0	0	0	1	1	6	0	1	3	1	0
5407356	Stripper Photoresist #843987	4	0	2	0	0	0	0	0	3	0	0	0
5407374	Ethanol V-1 200 (Vanzol)	1	0	0	0	0	0	0	0	0	0	0	0
5407376	Isopropyl Alcohol (IPA) 99%	8	6	6	14	6	9	8	11	12	14	12	14
5407408	Lubricant Spray Molykote 321R Dow-Corning	0	1	0	1	0	0	0	0	0	3	0	0
5407431	Lubricant CRC 3-36 #03005	14	13	8	17	4	20	18	2	24	0	19	25
5407433	Lubricant CRC 3-36 (Gallon Can)	0	3	3	2	3	4	0	4	0	2	0	2
5407435	Lube Teflon #79417	0	0	2	0	2	0	1	0	0	0	0	0
5407436	Lubricant Teflon Dry #79418	0	0	0	0	3	0	1	0	0	0	0	0
5407439	Cement Neoprene Turntable Covering Carbo	0	0	0	0	0	0	0	0	1	0	0	0
5407466	Skyliquid Wax for Enya	132	158	7.52	123	125	122	0.6	4	0	0	1	13
5407470	Cleaner Zero Residue Instant Teck Spray	0	1	10	1	8	0	5	4	1	0	0	7
5407938	Caviclean #2 Cleaning Solution Turco	0	1	1	0	1	1	0	1	1	1	0	2
5407947	Lubricant Silicon	0	0	0	0	2	0	1	0	0	2	0	0
5407948	Grease Multi Purpose White	1	0	0	0	0	0	0	0	0	2	0	1
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	4	4	6	5	5	9	5	10	1	8	6	7
5407956	Hardner AD1211-B Red Pigment	6	3	6	6	4	9	7	7	4	6	8	5
5407957	Epoxy STC Fast Cure Grey	81	61	121	123	162	225	166	129	162	97	195	71
5407963	Mold-Release Wiz F-57NC 1 Gallon	0	0	0	0	0	0	0	0	0	0	0	0
5407964	Mold-Cleaner Cleanwiz 9 1 Gallon	0	0	0	0	0	0	0	0	0	0	0	0
5407967	Adhesive Tixo K-10 10 Gm/Each	0	0	1	0	0	0	0	0	1	0	1	0
5413542	Skyliquid Wax for Enya, HF-4011	0	0	0	0	0	174	187	303	240	318	345	359
* this category contains part numbers 5406902-4 and 5406906-12													
5406902	Paint Krylon White Enamel Glossy #1501	3	1	6	6	2	0	0	1	0	1	1	10
5406903	Paint Gray Primer 2X982 16oz.	8	0	14	0	0	4	2	0	1	5	5	6
5406904	Paint Supercoat 316L SS Aerosol Can	0	0	6	2	0	0	7	0	0	0	0	0
5406906	Paint John Deere Green	1	0	4	0	0	0	0	0	0	0	1	0
5406907	Paint Chevrolet Orange	1	2	0	0	0	0	2	1	0	0	1	0
5406908	Paint Ford Red	0	0	0	0	0	0	0	0	0	0	1	0
5406909	Paint High Heat Black	0	0	0	0	2	1	4	0	0	0	1	0
5406910	Paint Chrysler Blue/ Napa	0	0	7	2	0	0	2	0	0	0	4	0
5406911	Paint Tan Industrial Enamel	0	0	0	0	0	0	0	0	1	3	0	0
5406912	Paint Glossy Black Spray Can #84000	1	0	1	0	0	0	1	0	0	0	0	0

SCOEPA00023019

Worksheet for Cleaning Solvent VOC Emissions

	Cleaning Solvent VOCs					
	5407374	5407376				
	Ethanol V-1 200 (Vanzol)	Isopropyl Alcohol (IPA) 99%	Total Evaporated or In Wastes	Ratio of monthly to total	VOC Emissions (lbs)	VOC Emissions (tons)
jan	372	2357.20	2729.20	0.076384	1146	0.57
feb	0	1767.90	1767.90	0.049479	743	0.37
mar	0	1767.90	1767.90	0.049479	743	0.37
apr	0	4125.10	4125.10	0.115452	1733	0.87
may	0	1767.90	1767.90	0.049479	743	0.37
jun	0	2651.85	2651.85	0.074219	1114	0.56
jul	0	2357.20	2357.20	0.065973	990	0.50
aug	0	3241.15	3241.15	0.090712	1362	0.68
sep	0	3535.80	3535.80	0.098959	1485	0.74
oct	0	4125.10	4125.10	0.115452	1733	0.87
nov	0	3535.80	3535.80	0.098959	1485	0.74
dec	0	4125.10	4125.10	0.115452	1733	0.87
totals	372	35358	35730		15009	7.5

Total cleaning solvent VOCs: 35730 lbs
Total cleaning solvent VOCs in waste shipments: 3038 lbs (voc to waste water and waste.xls)
Total IPA in waste water: 17683 lbs (voc to waste water and waste.xls)

Total Cleaning Solvent VOC Emissions: 15009 lbs or 7.5 tons

Worksheet for Emision Statement

VOCs

	Total VOCs Evaporated or In Wastes (lbs)
Jun	3258.71
Jul	2761.29
Aug	3813.40
Total:	9833.40

VOCs in waste shipments for 1997: 3038 lbs (voc to waste water and waste.xls)
Quarterly VOCs in waste shipments for 1997: 760 lbs
Total IPA in waste water in 1997: 17683 lbs (voc to waste water and waste.xls)
Quarterly IPA in waste water in 1997: 4421 lbs
(Quarterly results based on even waste distribution throughout the year.)

Total 1997 Ozone Season VOC Emissions: 4653 lbs or 51 lbs/day (Does not include natural gas and diesel & kerosene usage.)
Add 1997 Fuel Usage VOC Emissions: 3820 lbs or 10.4 lbs/day (AP-42 calcs_97.xls)
Therefore, Grand Total 1997 Ozone Season VOC Emissions: 61 lbs/day

NOx

1997 Fuel Usage NOx Emissions: 58554 lbs (AP-42 calcs_97.xls)
Total 1997 Ozone Season NOx Emissions: 14639 lbs or 159 lbs/day (Does not include manufacturing emissions.)
Add June, July, & August Mfg. NOx Emissions: 2767 lbs or 30 lbs/day (Nox_97.xls)
Therefore, Grand Total 1997 Ozone Season NOx Emissions: 189 lbs/day

SCOEPA00023020

Analytical data from North Creek Analytical for 1997
(reports from Tom Rothschild/Facilities Lab)

CE Parshall Flume Data				OWW Second stage grab					Million Gallons**	
Date	Acetone (ppb)	MRL		Date	Acetone (ppb)	*IPA (ppb)	month	CE Flows	OWW flows
15-Jan	108		25	15-Jan	757	NA	jan	21.214	16.288
5-Feb	25	"ND"		5-Feb	389	NA	feb	21.841	14.561
12-Mar	25	"ND"		12-Mar	495	NA	mar	24.533	16.443
10-Apr	55.5			10-Apr	898	NA	apr	23.456	18.491
8-May	55.2			8-May	1370	NA	may	25.224	20.15
3-Jun	95.4			3-Jun	1060	NA	jun	24.755	18.715
16-Jul	84.8			20-Aug	776	NA	jul	24.639	24.692
6-Aug	102			4-Dec	973	NA	aug	24.133	26.555
3-Sep	150						sep	16.873	32.881
3-Oct	266						oct	25.666	25.497
12-Nov	314						nov	23.557	25.71
4-Dec	409						dec	23.717	26.567
Avg:	140.825			*Avg:	839.75	10066.67	total	279.608	266.55

OWW = Organic Waste Water
*IPA analyses not performed in 1997. Avg conc. from 1996.
ppb = ug/l
**Info from W.W.P.T. Monitoring Reports (reports from Tom Rothschild)

CE = Combined Effluent (Weak Acid Drain + Concentrated Acid Drain)
NA = Not Analyzed

POTW flows: (from OWW system)
266550000 gallons for the year
22212500 per month, assuming flow is consistent

River flows: (from WAD + CAD systems)
279608000 gallons for the year
23300667 per month, assuming flow is consistent

calculating monthly amount of acetone to POTW:					
839.75 galAcetone / 1E+09 galWater	22212500 galwater / month	6.59 lbAcetone / galAcetone	123 lb Acetone / month		
calculating monthly amount of acetone to RIVER:				145 lb Acetone to waste water / month	
140.825 galAcetone / 1E+09 galWater	23300667 galwater / month	6.59 lbAcetone / galAcetone	22 lb Acetone / month		
calculating yearly amount of IPA to POTW:				17683 lb IPA to waste water / year	
10066.67 galIPA / 1E+09 galWater	266550000 galwater / year	6.59 lbIPA / galIPA	17683 lb IPA / year		

::
Total lbs VOC in waste water for 1997: 17683 or 8.8 tons

SCOEPA00023021

W.W.P.T. MONITORING REPORT

MONTH Jan 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1		.534	.348	.882	0	0				0	0		
2		.534	.336	.870	0	0				0	0		
3		.649	.336	.985	0	0		.6518	.6518	0	0		
4		.659	.395	1.084	0	0		.659	.659	0	0		
5		.707	.405	1.112	0	0		.692	.692	0	0		
6		.664	.473	1.137	0	0		.656	.656	0	0		
7		.595	.303	.898	0	0		.557	.557	0	0		
8		.562	.341	.903	0	0		.621	.621	0	0		
9		.677	.540	1.217	0	0		.585	.585	0	0		
10		.674	.389	1.063	0	0		.437	.437	0	0		
11		.670	.217	.887	0	0		.524	.524	0	0		
12		.692	.513	1.205	0	0		.526	.526	0	0		
13		.676	.366	1.042	0	0		.514	.514	0	0		
14		.675	.385	1.050	0	0		.596	.596	0	0		
15		.699	.385	1.084	0	0		.579	.579	0	0		
16		.659	.376	1.035	0	0		.586	.586	0	0		
17		.600	.393	.993	0	0		.580	.580	0	0		
18		.722	.373	1.095	0	0		.564	.564	0	0		
19		.666	.436	1.102	0	0		.666	.666	0	0		
20		.679	.375	1.054	0	0		.636	.636	0	0		
21		.703	.423	1.126	0	0		.535	.535	0	0		
22		.500	.307	1.167	0	0		.471	.471	0	0		
23		.789	.365	1.154	0	0		.511	.511	0	0		
24		.631	.421	1052	0	0		.505	.505	0	0		
25		.889	.431	1.320	0	0		.557	.557	0	0		
26		.634	.458	1.092	0	0		.466	.466	0	0		
27		.750	.404	1.154	Ø	Ø		.502	.502	Ø	Ø		
28		.673	.358	1.031	Ø	Ø		.435	.435	Ø	Ø		
29		.7518	.374	1.125	0	0		.593	.593	0	0		
30		.782	.394	1.176	0	0		.492	.492	0	0		
31		.789	.375	1.164	Ø	Ø		.542	.542	Ø	Ø		
TOTAL	~~21.214~~	~~30.577~~	12.055	32.632					16.288				
AVG	~~0.684~~	~~0.669~~	0.389						0.525				

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W.W.P.T. MONITORING REPORT
MONTH FEB 19_97

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1	Ø	.801	.376	1.177	Ø	Ø	Ø	.543	.543	Ø	Ø		
2	Ø	.722	.493	1.215	Ø	Ø	Ø	.444	.444	Ø	Ø		
3	Ø	.661	.435	1.096	Ø	Ø	Ø	.582	.582	Ø	Ø		
4	Ø	.738	.474	1.212	Ø	Ø	.073	.557	.630	Ø	Ø		
5	Ø	.754	.273	1.027	Ø	Ø	Ø	.575	.575	Ø	Ø		
6	Ø	.749	.413	1.162	Ø	Ø	Ø	.659	.659	Ø	Ø		
7	Ø	.859	.406	1.265	Ø	Ø	Ø	.472	.472	Ø	Ø		
8	Ø	.832	.567	1.399	Ø	Ø	Ø	.564	.568	Ø	Ø		
9	Ø	.869	.423	1.292	Ø	Ø	Ø	.599	.599	Ø	Ø		
10	Ø	.821	.419	1.240	Ø	Ø	Ø	.536	.536	Ø	Ø		
11	Ø	.798	.284	1082	Ø	Ø	Ø	.456	.456	Ø	Ø		
12	Ø	.720	.392	1.112	Ø	Ø	Ø	.463	.463	Ø	Ø		
13	Ø	.690	.400	1090	Ø	Ø	Ø	.500	.500	Ø	Ø		
14	Ø	.698	.384	1082	Ø	Ø	Ø	.443	.443	Ø	Ø		
15	Ø	.767	.389	1156	Ø	Ø	Ø	.472	.472	Ø	Ø		
16	Ø	.836	.420	1256	Ø	Ø	Ø	.511	.511	Ø	Ø		
17	Ø	.759	.370	1129	Ø	Ø	Ø	.495	.495	Ø	Ø		
18	Ø	.770	.407	1177	Ø	Ø	Ø	.400	.400	Ø	Ø		
19	Ø	.885	.508	1.393	Ø	Ø	Ø	.460	.460	Ø	Ø		
20	Ø	.856	.454	1.300	Ø	Ø	Ø	.491	.491	Ø	Ø		
21	Ø	.697	.568	1.265	Ø	Ø	Ø	.428	.428	Ø	Ø		
22	Ø	.821	.521	1.342	Ø	Ø	Ø	.602	.602	Ø	Ø		
23	Ø	.822	.369	1.191	Ø	Ø	Ø	.602	.602	Ø	Ø		
24	Ø	.708	.369	1.077	Ø	Ø	Ø	.545	.545	Ø	Ø		
25	Ø	.766	.382	1.148	Ø	Ø	Ø	.543	.543	Ø	Ø		
26	Ø	.775	.431	1.206	Ø	Ø	Ø	.507	.502	Ø	Ø		
27	Ø	.848	.584	1.432	Ø	Ø	Ø	.522	.522	Ø	Ø		
28	Ø	.819	.252	1.071	Ø	Ø	Ø	.518	.518	Ø	Ø		
29													
30													
31													
TOTAL		24.841							14.561				
AVG		0.790							0.520				

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W.W.P.T. MONITORING REPORT

MONTH March 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1	0	.815	.413	1.228	0	0	0	.501	.501	0	0		
2	0	.822	.475	1.297	0	0	0	.514	.514	0	0		
3	0	.821	.402	1.223	0	0	0	.527	.527	0	0		
4	0	.789	.459	1.248	0	0	0	.469	.469	0	0		
5	0	.633	.422	1.055	0	0	0	.453	.453	0	0		
6	0	.519	.277	1.096	0	0	0	.578	.578	0	0		
7	0	.643	.266	1.109	0	0	0	.303	.303	0	0		
8	0	.873	.267	1.139	0	0	0	.530	.530	0			
9	0	.794	.319	1.113	0	0	0	.530	.530	0			
10	0	.713	.306	1.024	0	0	0	.516	.516	0	0		
11	0	.758	.244	1.002	0	0	0	.488	.488	0	0		
12	0	.818	.250	1.068	0	0	0	.535	.535	0	0		
13	0	.795	.283	1.078	0	0	0	.492	.492	0	0		
14	0	.896	.337	1.233	0	0	0	.497	.497	0	0		
15	0	.780	.192	.972	0	0	0	.448	.448	0	0		
16	0	.814	.269	1.083	0	0	0	.482	.482	0	0		
17	0	.776	.418	1.194	0	0	0	.476	.476	0	0		
18	0	.763	.299	1.062	0	0	0	.462	.462	0	0		
19	0	.702	.231	.933	0	0	0	.429	.429	0	0		
20	0	.841	.243	1.084	0	0	0	.499	.499	0	0		
21	0	.845	.362	1.257	0	0	0	.533	.533	0	0		
22	0	.682	.210	.892	0	0	0	.496	.496	0	0		
23	0	.823	.321	1.144	0	0	0	.543	.543	0	0		
24	0	.781	.267	1048	0	0	0	.477	.477	0	0		
25	0	.857	.215	1.052	0	0	0	.455	.455	0	0		
26	0	.849	.317	1.166	0	0	0	.623	.623	0	0		
27	0	.841	.249	1.090	0	0	0	.749	.749	0	0		
28	0	.836	.252	1.088	0	0	0	.500	.500	0	0		
29	0	.633	.264	.897	0	0	0	.601	.601	0	0		
30	0	.756	.294	1.050	0	0	0	.593	.593	0	0		
31	0	.960	.292	1.052	0	0	0	.617	.617	0	0		
TOTAL		24.533							16.943				
AVG		0.791							0.530				

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W.W.P.T. MONITORING REPORT
MONTH April 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1	Ø	.800	.196	.996	Ø	Ø	Ø	.625	.625	Ø	Ø		
2	Ø	.821	.272	1.093	Ø	Ø	Ø	.510	.510	Ø	Ø		
3	Ø	.788	.256	1.044	Ø	Ø	Ø	.538	.538	Ø	Ø		
4	Ø	.752	.249	1.001	Ø	Ø	Ø	.594	.594	Ø	Ø		
5	Ø	.761	.262	1.023	Ø	Ø	Ø	.609	.609	Ø	Ø		
6	Ø	.751	.290	1.041	Ø	Ø	Ø	.781	.781	Ø	Ø		
7	Ø	.741	.290	1.031	Ø	Ø	Ø	.649	.649	Ø	Ø		
8	Ø	.793	.110	.903	Ø	Ø	Ø	.662	.662	Ø	Ø		
9	Ø	.744	.247	.991	Ø	Ø	Ø	.645	.645	Ø	Ø		
10	Ø	.792	.340	1.132	Ø	Ø	Ø	.628	.628	Ø	Ø		
11	Ø	.765	.245	1.010	Ø	Ø	Ø	.626	.626	Ø	Ø		
12	Ø	.712	.158	.870	Ø	Ø	Ø	.592	.592	Ø	Ø		
13	Ø	.872	.263	1.135	Ø	Ø	Ø	.617	.617	Ø	Ø		
14	Ø	.816	.314	1.130	Ø	Ø	Ø	.543	.543	Ø	Ø		
15	Ø	.815	.294	1.109	Ø	Ø	Ø	.617	.617	Ø	Ø		
16	Ø	.755	.263	1.018	Ø	Ø	Ø	.672	.672	Ø	Ø		
17	Ø	.819	.206	1.025	Ø	Ø	Ø	.581	.581	Ø	Ø		
18	Ø	.786	.262	1.048	Ø	Ø	Ø	.603	.603	Ø	Ø		
19	Ø	.845	.333	1.178	Ø	Ø	Ø	.645	.645	Ø	Ø		
20	Ø	.866	.256 ~~.340~~	1.122	Ø	Ø	Ø		.618 (Bad Disk)				
21	Ø	.641	.209	.850	14:27	Ø	Ø	.504	.504	Ø	Ø		
22	Ø	.922	.261	1.183	14:27	Ø	Ø	.719	.719	Ø	Ø		
23	Ø	.691	.345	1.036	14.27	Ø	Ø	.621	.621	Ø	Ø		
24	Ø	.752	.284	1.036	14.27	Ø	Ø	.622	.622	Ø	Ø		
25	Ø	.840	.149	1.039	14.27	Ø	Ø	.607	.607	Ø	Ø		
26	Ø	.782	.246	1.028	14.27	Ø	Ø	.638	.638	Ø	Ø		
27	Ø	.694	.361	1.055	14.27	Ø	Ø	.576	.576	Ø	Ø		
28	Ø	.715	.342	1057	14.27	Ø	Ø	.607	.607	Ø	Ø		
29	Ø	.784	.262	1046	14.27	Ø	Ø	.659	.659	Ø	Ø		
30	Ø	.791	.159	.950	14.27	Ø	Ø	.579	.579	Ø	Ø		
31													
TOTAL		23.456							18.491				
AVG		0.782							0.616				

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W.W.P.T. MONITORING REPORT
MONTH MAY 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1	Ø	.762	.249	1.011	Ø	—	Ø	.575	.575	Ø	—	—	—
2	—	.839	.270	1.109	Ø	—	—	.641	.641	Ø	—	—	—
3	—	.865	.320	1.185	Ø	—	—	.632	.632	Ø	—	—	—
		795						.535	.535				
5	Ø	.817	.312	1.161	Ø		Ø	.711	.711				
6	Ø	.753	.207	0.960	Ø	—	Ø	.636	.636	Ø			
7	0	.785	.271	1.008	0	—	0	.641	.641	0			
8	Ø	.806	.356	1.162	0	—	0	.669	.669	Ø			
9	Ø	.888	.287	1.175	Ø	—	Ø	.683	.683	Ø			
10	Ø	.749	.236		Ø	—	Ø			Ø			
11	Ø	.820	.291	1.111	Ø	—	Ø	.693	.693	Ø			
12	Ø	.783	.291	1074	Ø		Ø	.691	.691	Ø			
13	Ø	.823	.242	1065	Ø		Ø	.710	.710	Ø			
14	Ø	.829	.480	1.309	Ø		Ø	.689	.689	Ø			
15	Ø	.828	.397	1.225	Ø	—	Ø	.687	.687	Ø			
16	0	.774	.520	1.294	0	—	0	.688	.688	0			
17	0	.849	.518	1.367	0	—	0	.669	.669	0			
18	0	.839	.524	1.363	0	—	0	.646	.646	0			
19	0	.781	.628	1.409	0	—	0	.612	.612	0			
20	0	.785	.373	1.158	0	—	0	.646	.646	0			
21	0	.763	.499	1.262	0	—	0	.647	.647	0			
22	0	.812	.471	1.283	0	—	0	.789	.789	0			
23	0	.774	.698	1.472	0	—	0	.794	.794	0			
24	0	.790	.401	1.191	0	—	0	.699	.699	0			
25	0	.824	.399	1.223	0	—	0	.666	.666	0			
26	Ø	.812	.545	1.357	0	—	Ø	.728	.728	0			
27	Ø	.722	.526	1.248	Ø	—	Ø	.691	.691	Ø			
28	0	.897	.513	1.410	0	—	0	.718	.718	0			
29	0	.922	.462	1.384	0	—	0	.674	.674	0			
30	0	.874	.501	1.375	0	—	0	.584	.584	0			
31	0	.867	.377	1.244	0	—	0	.706	.706	0			
TOTAL		25.224							20.150				
AVG		0.814							0.650				

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W.W.P.T. MONITORING REPORT
MONTH June 19 97

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1		0.868	0.377						.624 (avg)				
2	Ø	.823	.552	1.375	Ø	—	Ø	.738	.738	Ø	/		
3	Ø	.866	.513	1.379	Ø	/	Ø	.790	.790	Ø	/		
4	Ø	.918	.520	1.438	Ø	Ø	Ø	.994	.994	Ø	/		
5	Ø	.898	.570	1.468	Ø	Ø	Ø	.716	.716	Ø	/		
6	Ø	.863	.907 *	1.770	Ø	Ø	Ø	.578	.578	Ø			
7	Ø	.878	.152	1.030	Ø	Ø	Ø	.565	.565	Ø			
8	Ø	.854	.405	1.259	Ø	Ø	Ø	.575	.575	Ø			
9	Ø	.852	.723	1.584	Ø	Ø	Ø	.572	.572	Ø			
10	Ø	.846	.789	1.635	Ø	Ø	Ø	.583	.583	Ø			
11	Ø	.857	.556	1.413	Ø	Ø	Ø	.590	.590	Ø			
12	Ø	.837	.372	1.209	Ø	Ø	Ø	.557	.557	Ø			
13	Ø	.852	.589	1.441	Ø	Ø	Ø	.576	.576	Ø			
14	Ø	.832	.662	1.474	Ø	Ø	Ø	.640	.640	Ø			
15	Ø	.836	.595	1.431	Ø	Ø	Ø	.579	.579	Ø			
16	Ø	.898	.681	1.579	Ø	Ø	Ø	.594	.594	Ø			
17	Ø	.821	.379	1.200	Ø	Ø	Ø	.585	.585	Ø			
18	Ø	.806	.490	1.296	Ø	Ø	Ø	.629	.629	Ø			
19	Ø	.721	.490	1.211	Ø	Ø	Ø	.584	.584	Ø			
20		.822	.669	1.491	Ø	Ø	Ø	.601	.601	Ø			
21	Ø	.764	.350	1.114	Ø	Ø	Ø	.600	.600	Ø			
22	Ø	.760	.400	1.100	Ø	Ø	Ø	.575	.575	Ø			
23	Ø	.759	.736	1.495	Ø	Ø	Ø	.629	.629	Ø			
24	Ø	.755	.536	1.291	Ø	Ø	Ø	.590	.590	Ø			
25	Ø	.679	.408	1.087	Ø	Ø	Ø	.513	.513	Ø			
26	Ø	.835	.406	1.241	Ø	Ø	Ø	.659	.659	Ø			
27	Ø	.833	.527	1.360	Ø	Ø	Ø	.651	.651	Ø			
28	Ø	.874	.573	1.397	Ø	Ø	Ø	.653	.653	Ø			
29	Ø	.876	.584	1.460	Ø	Ø	Ø	.620	.620	Ø			
30	Ø	.802	.686	1.488	Ø	Ø	Ø	.547	.547	Ø			
31		✓ 24.755											
TOTAL		~~24.057~~	16.197						18.715				
AVG		~~0.796~~	0.540						0.624				

✓ 0.825 * 6-6 MV3 taken at 13:00

F:\ENGR\GRK\WINDOWS\PROJECTS\WWTP\H20MON.WB1

W.W.P.T. MONITORING REPORT

MONTH July 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1	Ø	.376	.401	1.277	Ø	—	Ø	.629	.629	Ø	—	—	—
2	Ø	.839	.612	1.451	Ø	—	Ø	.624	.624	Ø	—	—	—
3	X	.870	.590	1.460	Ø	—	Ø	.703	703	Ø	—	—	—
4	Ø	.822	.492	1.314	Ø	—	Ø	.823	.823	Ø	—	—	—
5	0	.797	.376	1.173	0	—	0	.806	.806	0	—	—	—
6	Ø	.783	.540	1.322	Ø	/	Ø	.803	.803	Ø	—	—	—
7	Ø	.729	.510	1.239	Ø	/	Ø	.753	.753	Ø	—	—	—
8	Ø	.842	.599	1.44	Ø	/	Ø	.786	.786	Ø	—	—	—
9	Ø	1.170	.545	1.615	Ø	—	Ø	.718	.719	Ø	—	—	—
10	Ø	.959	.437	1.396	Ø	—	Ø	.798	.798	Ø	—	—	—
11	Ø	.739	.641	1.380	Ø	/	Ø	.752	.752	Ø	—	—	—
12	Ø	.815	.827	1.642	Ø	/	Ø	.742	.742	Ø	—	—	—
13	Ø	.711	.540	1.251	Ø	/	Ø	.627	.627	Ø	—	—	—
14	Ø	.826	.524	1.350	Ø	—	Ø	.808	.808	Ø	—	—	—
15	Ø	.771	.459	1.230	Ø	/	Ø	.650	.650	Ø	—	—	—
16	Ø	.826	.524	1.350	Ø	/	Ø	.808	.808	0	—	—	—
17	Ø	.814	.612	1.426	Ø	/	Ø	.828	.828	Ø	—	—	—
18	Ø	.835	.507	1.342	0	—	0	.883	.883	0	—	—	—
19	Ø	.712	.417	1.129	Ø	/	Ø	.759	.759	Ø	—	—	—
20	Ø	.853	.465	1.321	Ø	—	Ø	.877	.877	Ø	—	—	—
21	Ø	.731	.620	1.351	Ø	/	Ø	.784	.784	Ø	—	—	—
22	Ø	.814	.691	1.505	Ø	/	Ø	.930	.930	Ø	—	—	—
23	0	.722	.672	1.394	Ø	/	0	.835	.835	/	—	—	—
24	Ø	.681	.402	1.083	Ø	/	Ø	.846	.846	Ø	—	—	—
25	Ø	.731	.501	1.232	Ø	/	Ø	.912	.912	Ø	—	—	—
26	Ø	.671	.666	1.337	Ø	/	0	.972	.972	0	—	—	—
27	Ø	.747	.658	1.405	Ø	/	0	.883	.883	0	—	—	—
28	Ø	.708	.564	1.272	0	/	Ø	.823	.823	Ø	—	—	—
29	Ø	.759	.551	1.310	0	—	0	.819	.819	0	—	—	—
30	Ø	.732	.650	1.382	Ø	/	0	.857	.857	Ø	Ø	—	—
31	Ø	.754	.654	1.408	Ø	/	Ø	.853	.853	Ø	Ø	—	—
TOTAL	Ø	24.639	17.247	41.987	Ø	Ø	Ø	24.692	24.692	Ø	Ø	—	—
AVG	Ø	0.795	0.556	1.354	Ø	Ø	Ø	0.796	0.796	Ø	Ø	—	—

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W.W.P.T. MONITORING REPORT

MONTH August 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1	Ø	.723	.480	1.683	Ø	Ø	Ø	.858	.858	Ø	Ø		
2	Ø	.791	.480	1.271	Ø	Ø	Ø	.866	.866	Ø	Ø		
3	0	.617	.642	1.259	0	0	0	.875	.875	0	0		
4	Ø	.764	.896	1.660	Ø	Ø	Ø	.857	.857	Ø	Ø		
5	0	.774	.411	1.185	0	0	0	.767	.767	0	0		
6	0	.877	.358	1.245	0	0	0	.773	.773	0	0		
7	Ø	.643	.547	1.190	Ø	Ø	Ø	.706	.706	Ø	Ø		
8	6	.771	.510	1.281	0	0	0	.905	.905	0	0		
9	Ø	.751	.501	1.252	Ø	Ø	Ø	.791	.791	Ø	Ø		
10	Ø	.672	.499	1.171	Ø	Ø	Ø	.733	.733	Ø	Ø		
11	Ø	.776	.504	1.280	Ø	Ø	Ø	.880	.880	Ø	Ø		
12	Ø	.794	.412	1.206	Ø	Ø	Ø	.866	.866	Ø	Ø		
13	Ø	.796	.556	1.352	Ø	Ø	Ø	.890	.890	Ø	Ø		
14	Ø	.732	.659	1.391	Ø	Ø	Ø	.838	.838	Ø	Ø		
15	Ø	.731	.701	1.432	Ø	Ø	Ø	.792	.792	Ø	Ø		
16	—	.888	.394	1.282	0	0	0	.841	.841	—	—		
17	Ø	.825	.619	1.444	Ø	Ø	Ø	.854	.854	Ø	Ø		
18	Ø	.798	.702	1.500	Ø	Ø	Ø	.833	.833	Ø	Ø		
19	0	.741	.567	1.308	Ø	Ø	Ø	.798	.798	Ø	Ø		
20	Ø	.945	.528	1.473	Ø	Ø	Ø	.853	.853	Ø	Ø		
21	—	.763	.511	1.274	—	—	—	.790	.790	—	—		
22	0	.840	.556	1366	0	0	0	.767	.767	0	0		
23	0	.884	.645	1.529	0	0	0	.910	.910	0	0		
24	Ø	.798	.612	1.41	Ø	Ø	Ø	.815	.815	Ø	Ø		
25	Ø	.802	.510	1.31	Ø	Ø	Ø	.904	.904	Ø	Ø		
26	Ø	.736	.573	1.309	Ø	Ø	Ø	.727	.727	Ø	Ø		
27	Ø	.776	.550	1.326	0	0	0	1.403	1.403	0	0		
28	Ø	.787	.419	1.206	0	0	0	1.035	1.035	0	0		
29	Ø	.823	.987	1.81	Ø	Ø	Ø	.928	.928	Ø	Ø		
30	Ø	.819	.494	1.313	Ø	Ø	Ø	.907	.907	Ø	Ø		
31	Ø	.732	.418	1.150	Ø	Ø	Ø	.793	.793	Ø	Ø		
TOTAL	0	24,133,000	17,247,000	41.380					26.555				
AVG	0	778,000	556,000	1.335					0.857				

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W.W.P.T. MONITORING REPORT
MONTH Sept 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1	Ø	.695	.101	.796	Ø	Ø	Ø	.751	.751	Ø	Ø		
2	Ø	.926	.353	1.279	Ø	Ø	Ø	.881	.881	Ø	Ø		
3	Ø	.880	.692	1.572	Ø	Ø	Ø	.962	.962	Ø	Ø		
4	Ø	.769	.435	1.204	Ø	Ø	Ø	.907	.907	Ø	Ø		
⑤	Ø	.536	.376	0.912	Ø	Ø	Ø	1.111	1.11	Ø	Ø		
6	Ø	.536	.959	1.495	Ø	Ø	Ø	1.197	1.197	Ø	Ø		
7	Ø	.503	.578	1.697	Ø	Ø	Ø	1.119	1.119	Ø	Ø		
8	Ø	.589	.795	1.384	Ø	Ø	Ø	1.204	1.204	Ø	Ø		
9	Ø	.526	.681	1.207	Ø	Ø	Ø	1.151	1.151	Ø	Ø		
10	Ø	.532	.504	1.036	Ø	Ø	Ø	1.139	1.139	Ø	Ø		
11	Ø	.512	.600	1.112	Ø	Ø	Ø	1.142	1.142	Ø	Ø		
12	Ø	.468	.535	1.003	Ø	Ø	Ø	1.049	1.049	Ø	Ø		
13	Ø	.577	.474	1.051	Ø	3355 (1)	Ø	1.218	1.218	Ø	Ø		
14	Ø	.534	.711	1.245	Ø	Ø	Ø	1.133	1.133	Ø	Ø		
15	Ø	.530	.682	1.212	3452	[redacted] (1)	Ø	1.155	1.155	Ø	Ø		
16	Ø	.478	.679	1.157	3452	[redacted]	Ø	1.026	1.026	Ø	Ø		
17	Ø	.567	.633	1.200	3452	Ø	Ø	1.183	1.183	Ø	Ø		
18	Ø	.467	.671	1.138	3452	Ø	Ø	1.045	1.045	Ø	Ø		
19	Ø	.507	.626	1.133	3452	Ø	Ø	1.156	1.156	Ø	Ø		
20	Ø	.515	.689	1.204	3452	Ø	Ø	1.169	1.169	Ø	Ø		
21	Ø	.499	.481	.980	3452	Ø	Ø	1.150	1.150	Ø	Ø		
22	Ø	.502	.790	1.292	3452	Ø	Ø	1.129	1.129	Ø	Ø		
23	Ø	.421	.525	.946	3452	Ø	Ø	1.157	1.157	Ø	Ø		
24	Ø	.520	.579	1.099	3452	Ø	Ø	1.184	1.184	Ø	Ø		
25	Ø	.500	.598	1.098	3452	Ø	Ø	1.188	1.188	Ø	Ø		
26	Ø	.518	.770	1.288	3452	Ø	Ø	1.256	1.256	Ø	Ø		
27	Ø	.432	.335	0.767	3452	Ø	Ø	1.273	1.273	Ø	Ø		
28	Ø	.449	.673	1.122	3452	Ø	Ø	1.033	1.033	Ø	Ø		
29	Ø	.505	.700	1.205	3452	Ø	Ø	.852	.852	Ø	Ø		
30	Ø	.880	.466	1.346	3452	Ø	Ø	.962	.962	Ø	Ø		
31	—	—	—										
TOTAL	0	16.873	17.681						32.881				
AVG	0	0.562	0.589						1.096				

(1) See Note on Back. JJR

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W.W.P.T. MONITORING REPORT
MONTH OCT 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1	—	.906	.435	1.341	III	?	—	.824	.824	—	—	—	—
2	—	.883	.534	1.417	III	—	—	.587	.587	—	—	—	—
3	—	.967	.554	1.521	III			.580	.580	—	—	—	—
4	—	.923	.690	1.613	III	—	—	.783	.783	—	—	—	—
5	—	.954	.536	1.490	III	—	—	.865	.865	—	—	—	—
6	—	.855	.693	1.548	III	—	—	.823	.823	—	—	—	—
7	—	.878	.400	1.278	III	—	—	.635	.635	—	—	—	—
8	—	.958	.741	1.700	III		—	.583	.583	—	—	—	—
9	—	.871	.425	1.296	III		—	.841	.841	—	—	—	—
10	—	.880	.650	1.530	III		—	.802	.802	—	—	—	—
11	—	.963	.883	1.846	III		—	.642	.642	—	—	—	—
12	—	.911	.788	1.699	III		—	.700	.700	—	—	—	—
13	—	.928	.657	1.585	III		—	.656	.656	—	—	—	—
14	—	.976	.490	1.466	III		—	.780	.780	—	—	—	—
15	—	.596	.725	1.321	III		—	.858	.858	—	—	—	—
16	—	.523	.453	.976	III		—	1.21	1.21	—	—	—	—
17	—	.557	.777	1.334	III		—	.966	.966	—	—	—	—
18	—	.663	.940	1.603	III		—	.888	.888	—	—	—	—
19	—	.895	.539	1.434	III		—	.865	.865	—	—	—	—
20	—	.881	.704	1.585	III		—	.946	.946	—	—	—	—
21	—	.784	.731	1.515	II	—	—	.918	.918	—	—	—	—
22	—	.942	.699	1.641	III		—	.867	.867	—	—	—	—
23	—	.959	.357	1.316	III	—	—	.825	.825	—	—	—	—
24	—	.751	.788	1.539	III	—	—	.956	.956	—	—	—	—
25	—	.510	.574	1.084	II	—	—	.910	.910	—	—	—	—
26	—	.786	.544	1.330		—	—	.352	.352	—	—	—	—
27	—	.805	.597	1.402	III	—	—	.893	.893	—	—	—	—
28	—	.816	.665	1.481	III	—	—	1.01	1.01	—	—	—	—
29	—	.810	.462	1.272	III	—	—	.946	.946	—	—	—	—
30	—	.842	.552	1.394	III	—	—	.850	.850	—	—	—	—
31		.693	.529	1.222	III	—	—	1.086	1.086	—	—	—	—
TOTAL		25.666							25.497				
AVG		0.828							0.822				

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W.W.P.T. MONITORING REPORT
MONTH NOV. 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1		.682	.713	1.395	0	0		.910	.910	0	0		
2		.925	.700	1.625	0	0		.887	.887	0	0		
3		.725	.579	1.304	0	0		.834	.834	0	0		
4		.722	.558	1.280	0	0		.766	.766	0	0		
5		.888	.316	1.204	0	0		.865	.865	0	0		
6		.748	.347	1.095	0	0		.847	.847	0	0		
7		.775	.360	1.135	0	0		.930	.930	0	0		
8		.806	.537	1.343	0	0		.900	.900				
9		.669	.678	1.347	0	0		.832	.832	0	0		
10		.759	.663	1.422	0	0		.953	.953	0	0		
11		.804	.719	1.523	0	0		1.095	1.095	0	0		
12		.782	.552	1.334	0	0		.8635	.8635	0	0		
13		.766	.329	1.095	0	0		.850	.850	0	0		
14		.758	.834	1.592	0	0		.865	.865	0	0		
15		.777	.689	1.466	0	0		.836	.836	0	0		
16		.769	.404	1.173	0	0		.821	.821	0	0		
17		.847	.413	1.260	0	0		.993	.993	0	0		
18		.823	.491	1.314	0	0		.904	.904	0	0		
19		.794	.770	1.564	10:54	11.2		.864	.864	0	0		
20		.865	.584	1.449	10:54	0		.904	.904	0	0		
21		.736	.545	1.281	1054			.816	.816	0	6		
22		.801	.375	1.176	1054			.854	.854	0	0		
23		.721	.401	1.122	1635	5.2		.801	.801	0	0		
24		.791	.689	1.480	1635			.916	.916	0	0		
25		.868	.641	1.509	1635			.641	.641	0	0		
26		.789	.518	1.307	1635			.884	.884	0	0		
27		.803	.360	1.163	1635			.724	.724	0	0		
28		.792	.463	1.255	1635			.865	.865	0	0		
29		.830	.806	1.636	1635			.921	.921	0	0		
30		.748	.481	1.229	1635			.928	.928	0	0		
31													
TOTAL		23.557							25.710				
AVG		0.785							0.857				

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W.W.P.T. MONITORING REPORT
MONTH Dec. 1997

DATE	NPDES						OWW					SLUDGE	
	FAB 1 CE MGD	FAB 2 CE MGD	MV#3 MGD	TOTAL MGD	OUTAGE METER	PH OUT	FAB 1 MGD	FAB 2 MGD	TOTAL MGD	OUTAGE METER	PH OUT	DATE PICK UP	% CAP
1	—	.712	.636	1.348	0	0	—	.932	.932	0	0	—	—
2	—	.594	.337	931	Ø	Ø	—	.594	.594	Ø	Ø	—	—
3	—	.688	.414	1.102	0	0	—	.868	.868	0	0	—	—
4	—	.813	.549	1.362	0	0	—	.931	.931	0	0	—	—
5	—	.739	.692	1.431	0	0	—	FLOW METER PULLED		12-4	1400	—	—
6	—	.761	.715	1.476	0	0	—	"	"	"	"		
7	—	.721	.586	1.307	Ø	Ø	—	"	"			—	—
8	—	.811	.554	1.365	Ø	Ø	—	"	"				
9	—	.804	.844	1.648	Ø	Ø	—	"	"			—	
10	—	.677	.400	1.080	Ø	Ø	—	"	"			—	
11	—	.802	.530	1.332	0	0	—	"	"			—	
12	—	742	.561	1.303	Ø	Ø	—	"	"				
13	—	.791	.560	1.351	Ø	Ø	—	"	"			—	
14	—	.751	.816	1.567	Ø	Ø	—	"	"			—	
15	—	.830	.355	1.185	Ø	Ø	—	"	"			—	—
16	—	.855	.555	1.410	0	0	—	"	"			—	—
17	—	1.053	.539	1.592	0	0	—	"	"			—	—
18	—	.984	.681	1.665	0	0	—	"	"			—	—
19	—	.843	.542	1.385	Ø	Ø	—	"	"			—	
20	—	.763	.435	1.198	0	0	—	"	"			—	
21	/	.645	.783	13.28	Ø	Ø		"	"			—	
22	/	.713	.598	1.311	Ø	Ø	/	"	"			—	—
23	/	.771	.721	1.492	Ø	Ø	/	"	"			—	—
24		.788	.414	1.202	Ø	Ø	/	"	"			—	—
25	/	.791	.506	1.297	0	0	/	"	"			—	—
26	/	.580	.533	1.113	0	0	/	"	"			—	—
27	/	.780	769	1.549	0	0	/	"	"			—	—
28	/	.746	.620	1.366	0	0	/	"	"			—	—
29	/	.766	.631	1.397	0	0	/	"	"			—	—
30	/	.700	.600	1300	Ø	Ø	/	"	"			—	—
31	/	.703	.570	1273	Ø	Ø	/	"				—	—
TOTAL		23.717							26.567				
AVG		0.765							0.857 (new avg.)				

F:\ENGR\GRK\WINDOWS\PROJECTS\WWTP\H20MON.WB1

Revised August 17, 1998

AP-42 emission factors, Vol. I, Table 3.4-1 (as referenced on Page 3 of ACDP Application Review Report Attachment):

	g/hphr
Particulate	0.24
CO	2.4
NOx	11
SOx	1.1
VOCs	0.33

Values used in calculating emissions:

10.5	usage, in hr	25	usage, in hr
400	kW rated power	1000	kW rated power
536.4	hp, converted using 1.341 hp = 1 kW	1341	hp, converted using 1.341 hp = 1 kW
0.25	load factor (power used/power rating)	0.5	load factor (power used/power rating)

The equation given by AP-42 is: hr*hp*load factor*emission factor
This yeilds the following emission estimates:

	lbs/year	tons/year
Particulate	10	0.00
CO	96	0.05
NOx	441	0.22
SOx	44	0.02
VOCs	13	0.01

(0.005)

Notes: Load factors based on conservative estimates of shutdown loads and preventative maintenance loads.
SOx emissions may be better estimated using purchased fuel information and sulfur balance.

Calculating for the fuels purchased in 1997 (includes Diesel #2, L/S Diesel #2, and Kerosene):

Given:	132.9	gal L/S Diesel #2 purchased;			702.3	gal Diesel #2 purchased;		677.7	gal Kerosene purchased	
This fuel contains:	maximum of	0.05	WT% sulfur;		0.375	WT% sulfur;		0.0655	WT% sulfur	
0.86	sp.gr.				0.86	sp.gr.		0.81	sp.gr.	
8.34	lbs/galH2O									
7.1724	lbs/gal diesel	953.212	lbs diesel		7.1724	5037.1765	lbs diesel	6.7554	4578.135	lbs kerosene
0.0035862	lbs sulfur/gal diesel	0.47661	lbs sulfur		0.0268965	18.889412	lbs sulfur	0.004425	2.998678	lbs sulfur

Assuming all the sulfur goes to SOx

Assuming SOx is:	0.00% SO	then	64.1	=MW SOx
	100.00% SO2			

then from the diesel fuel the SOx emissions were:

	32.1	MW sulfur, lbs/lbmol
gives	0.6967195	lbmol sulfur
which is	0.6967195	lbmol SOx
and equals	44.65972	lbs SOx emitted by the fuel
or	0.0223299	tons SOx

SCOEPA00023034

Original

But printed February 10, 1998 uses 3.4-1 Table

AP-42 emission factors, Vol. I, Table 3.3-1: lb/hr!!

	lb/hphr	g/hphr
Particulate	0.143	1.00
CO	0.434	3.03
NOx	2.01	14.0
SOx	0.133	0.931
VOCs	0.160	1.12

(exhaust hydrocarbons)

Values used in calculating emissions:

10.5	usage, in hr
400	kW rated power
536.4	hp, converted using 1.341 hp = 1 kW
0.25	load factor (power used/power rating)

25	usage, in hr
1000	kW rated power
1341	hp, converted using 1.341 hp = 1 kW
0.5	load factor (power used/power rating)

The equation given by AP-42 is: hr*hp*load factor*emission factor
This yeilds the following emission estimates:

	lbs/year	tons/year
Particulate	2598	1.30
CO	7886	3.94
NOx	36523	18.26
SOx	2417	1.21
VOCs	2907	1.45

Notes: Load factors based on conservative estimates of shutdown loads and preventative maintenance loads.
SOx emissions may be better estimated using purchased fuel information and sulfur balance.

Calculating for the fuels purchased in 1997 (includes Diesel #2, L/S Diesel #2, and Kerosene):

Given:	132.9	gal L/S Diesel #2 purchased;			702.3	gal Diesel #2 purchased;		677.7	gal Kerosene purchased	
This fuel contains:	maximum of	0.05	WT% sulfur;		0.375	WT% sulfur;		0.0655	WT% sulfur	
0.86	sp.gr.				0.86	sp.gr.		0.81	sp.gr.	
8.34	lbs/galH2O									
7.1724	lbs/gal diesel	953.212	lbs diesel		7.1724	5037.1765	lbs diesel	6.7554	4578.135	lbs kerosene
0.0035862	lbs sulfur/gal diesel	0.47661	lbs sulfur		0.0268965	18.889412	lbs sulfur	0.004425	2.998678	lbs sulfur

Assuming all the sulfur goes to SOx

Assuming SOx is:	0.00%	SO	then	64.1 =MW SOx
	100.00%	SO2		

then from the diesel fuel the SOx emissions were:

	32.1	MW sulfur, lbs/lbmol
gives	0.6967195	lbmol sulfur
which is	0.6967195	lbmol SOx
and equals	44.65972	lbs SOx emitted by the fuel

SCOEPA00023035

Emissions from burning diesel fuel in emergency generators,
other internal combustion engines

AP-42 emission factors, Vol. I, Table 3.3-1:

	lb/hphr	
Particulate	0.143	
CO	0.434	
NOx	2.01	
SOx	0.133	
VOCs	0.160	(exhaust hydrocarbons)

Values used in calculating emissions:

10.5	usage, in hr	25	usage, in hr
400	kW rated power	1000	kW rated power
536.4	hp, converted using 1.341 hp = 1 kW	1341	hp, converted using 1.341 hp = 1 kW
0.25	load factor (power used/power rating)	0.5	load factor (power used/power rating)

The equation given by AP-42 is: hr*hp*load factor*emission factor
This yeilds the following emission estimates:

	lbs/year	tons/year
Particulate	2598	1.30
CO	7886	3.94
NOx	36523	18.26
SOx	2417	1.21
VOCs	2907	1.45

Notes: Load factors based on conservative estimates of shutdown loads and preventative maintenance loads.
SOx emissions may be better estimated using purchased fuel information and sulfur balance.

Calculating for the fuels purchased in 1997 (includes Diesel #2, L/S Diesel #2, and Kerosene):

Given:	132.9	gal L/S Diesel #2 purchased;		702.3	gal Diesel #2 purchased;		677.7	gal Kerosene purchased
This fuel contains:	maximum of	0.05	WT% sulfur;	0.375	WT% sulfur;		0.0655	WT% sulfur
0.86	sp.gr.			0.86	sp.gr.		0.81	sp.gr.
8.34	lbs/galH2O							
7.1724	lbs/gal diesel	953.212	lbs diesel	7.1724	5037.1765	lbs diesel	6.7554	4578.135 lbs kerosene
0.0035862	lbs sulfur/gal diesel	0.47661	lbs sulfur	0.0268965	18.889412	lbs sulfur	0.004425	2.998678 lbs sulfur

Assuming all the sulfur goes to SOx

Assuming SOx is:	0.00%	SO	then	64.1 =MW SOx
	100.00%	SO2		

then from the diesel fuel the SOx emissions were:

	32.1	MW sulfur, lbs/lbmol
gives	0.6967195	lbmol sulfur
which is	0.6967195	lbmol SOx
and equals	44.65972	lbs SOx emitted by the fuel

SCOEPA00023036

Emissions from burning diesel fuel in emergency generators, other internal combustion engines

AP-42 emission factors, Page 3.3-1, Vol I

	lb/hphr
Particulate	0.0143
CO	0.434
NOx	2.01
SOx	0.133

VOCs are not listed in the table for this type of emissions source

Values used in calculating emissions:

10.5	usage, in hr
400	kW rated power
536.4	hp, converted using 1.341 hp = 1 kW
0.25	load factor (power used/power rating)

25	usage, in hr
1000	kW rated power
1341	hp, converted using 1.341 hp = 1 kW
0.25	load factor (power used/power rating)

The equation given by AP-42 is: hr*hp*load factor*emission factor

This yeilds the following emission estimates:

	lbs/year	tons/year
Particulate	140	0.07
CO	4249	2.12
NOx	19676	9.84
SOx	1302	0.65

Notes: The load factor of .25 gives a conservative estimate. ~~The operation records for the emergency generators shows that they were run mostly without load~~

This information gives a worst case emission estimate for sulfur compounds from the burning of deisel fuel.

Calculating for the diesel fuels purchased in 1997 (includes Diesel #2, L/S Diesel #2, and Kerosene):

Given: 1512.9 gal purchased

This diesel contains a maximum of 0.05 WT% sulfur

0.86	sp.gr. (0.81 for Kerosene)	
8.34	lbs/galH2O	
7.1724	lbs/gal diesel	10851.1 lbs diesel
0.0035862	lbs sulfur/lb diesel	38.9143 lbs sulfur

Assuming all the sulfur goes to SOx

Assuming SOx is:	0.00%	SO	then	64.1 =MW SOx
	100.00%	SO2		

then from the diesel fuel the SOx emissions were:

	32.1	MW sulfur, lbs/lbmol
gives	1.2122835	lbmol sulfur
which is	1.2122835	lbmol SOx
and equals	77.707373	lbs SOx emitted by the diesel fuel

SCOEPA00023037

Pacific Northern Analytical
Portland, OR (503) 286-9845

February 11, 1997

Gary Ayers
Albina Fuel
3246 NE Broadway
Portland, OR 97232

Dear Gary:

Enclosed sulfur analysis of the No.1 Diesel Fuel sample submitted on February 7, 1997.

If you have any questions regarding this report or if you need any other assistance, please do not hesitate to call me.

Sincerely,

David Doyle

Pacific Northern Analytical [illegible]land, OR (503) 286-9845

Client: Albina Fuel
Sample Date:
Sample Matrix: Fuel Oil
Date Received: February 07, 1997
Date Analyzed: February 07, 1997
Laboratory Batch No: 54507

Test	Sample Result Sample I.D.	Units	Method
	Diesel Fuel No.1		
Sulfur	0.0093	Mass%	ASTM D4951

Notes:

Project Chemist: D.B.D.

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

December 16, 1996

Mr. Tom McCue
Wacker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Mr. McCue:

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on December 5, 1996. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria of less than 15% of the audit value or ± 5 ppm, whichever is higher. The accuracy of the NO CEM was calculated to be 4% and 0.2% for audit points 1 and 2; respectively. The accuracy of the NO_x CEM was calculated to be 4% and 0.7% respectively. Test data was recorded in the Data Assessment Report in the Appendix.

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F.

For the CGA, each monitor (NO and NO_x) was challenged three times with three independent audit standards: one zero standard of N_2, and two NIST traceable cylinders of NO gas at concentrations equal to 26% and 55% of the instrument span. The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

If you have any questions, please contact us.

Sincerely,

HORIZON ENGINEERING

Kurt D. Torgerson

cc: Frank Deaver, Deaver Environmental Group
Eric Spiering, Wacker Siltronic

attachments: Data Assessment Report
Field Data
CEMS Data
Calibration Gas Certificates

SCOEPA00023041

Data Assessment Report

Client	Deaver Environmental Group	Period Ending Date	
Plant name	Wacker Siltronics		
Source Unit No.	NOx scrubbing system outlet	Date of Audit	12/15/96
Audited by	Kurt Torgerson, Horizon Engineering		

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero	Audit Point 1	Audit Point 2	
Cylinder ID No.			XC006159B	XC006129B	
Date of Certification			5/3/96	5/3/96	
Type of Certification			NIST-SRM	NIST-SRM	
Certified Audit Value			26.4	55.3	
% of Span Value			26%	55%	

CEMS Response Time	58 seconds
Sampled for 2x response time, +	

CEMS Response Value NO Analyzer / Model # CFA-311A Mfg# 568833012

		Zero	Audit Point 1	Audit Point 2	Time
Run 1		2.00	27.20	54.70	1522-1527
Run 2		2.90	27.60	55.30	1532-1535
Run 3		2.60	27.80	56.20	1541-1546
Average			27.53	55.40	
Accuracy, % difference			4.3%	0.2%	
Accuracy, difference, ppm			1.1	0.1	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	+/- 5	+/- 5

CEMS Response Value NOx Analyzer / Model # CFA-311A Mfg# 568833011

		Zero	Audit Point 1	Audit Point 2	Time
Run 1		1.60	27.10	55.20	1522-1527
Run 2		2.40	27.40	55.60	1532-1535
Run 3		2.30	28.00	56.30	1541-1546
Average			27.50	55.70	
Accuracy, % difference			4.2%	0.7%	
Accuracy, difference, ppm			1.1	0.4	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	8
or,	ppm	+/- 5	+/- 5

Comments

Heated Line Temp - 196 degrees F

Confirm Logbook Entry x

SCOEPA00023042

Wacker Siltronics

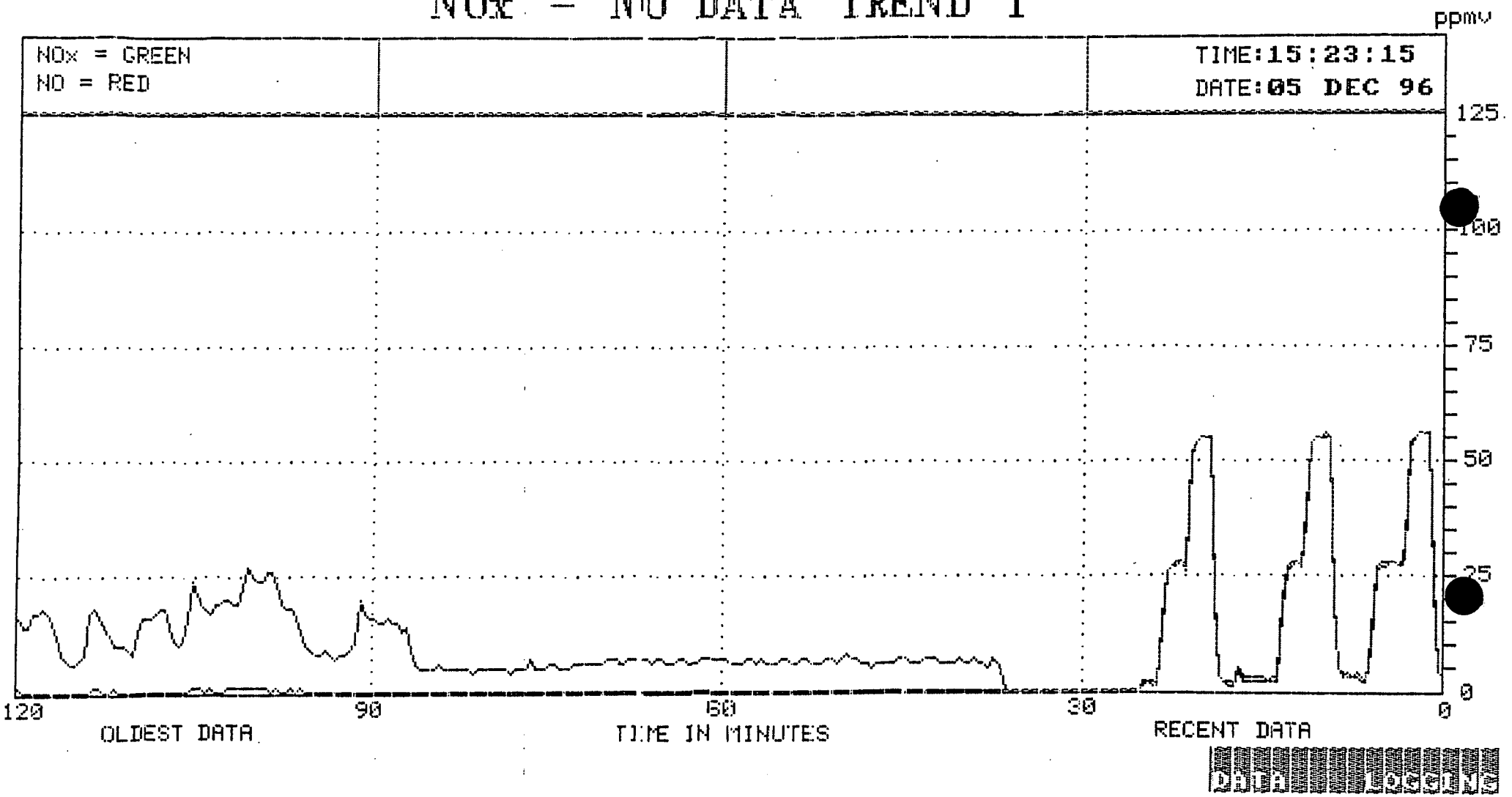
CGA Field Data

RUN #	Ø N_2	26.4		55.3	TIME
1	2.0	27.2	← NO →	54.7	1522 Ø 1525 K
	1.6	27.1	← NOx →	55.2	1527 ~~NOx~~
	2.4	27.4	NOx	55.6	1532
2.	2.9	27.6	NO	55.3	1535
3.	~~2.8~~ 2.6	27.8	NO	56.2	1541
	~~3.4~~ 2.3	28.0	NOx	56.3	1546

12/5/96

SEND REPORT TO: ERIC SPEARING

NOx - NO DATA TREND 1



#N2

BOC GASES

1715 N.E. 78th Street
Vancouver, WA 98665
Telephone: 360 695 1267
503-283-2561
FAX 360-698-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5479
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted. 55 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC006129B Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	55 ppm	55.3 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By [signature]
Authorized Signature

Check for OFF SPEC result.

WHITE - Customer Copy

#N3

BOC GASES

4715 N E 78th Street
Vancouver WA 98665
Telephone 360-695 1257
503 283 2561
FAX 360-696-3975

774631

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5480
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted: 27 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC0061598 Size 152. CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	27 ppm	26.4 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By _____
Authorized Signature

WHITE Customer Copy

SCOEPA00023046

HORIZON ENGINEERING LLC

13585 N.E. Whitaker Way • Portland, OR 97230
Phone (503)255-5050 • Fax (503)255-0505
horizone@teleport.com

August 8,1996

Mr. Tom McCue
Wacker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Mr. McCue:

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on August 7, 1996. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria of less than 15% of the audit value or ± 5 ppm, whichever is higher. The accuracy of the NO CEM was calculated to be 4% and 0.6% for audit points 1 and 2; respectively. The accuracy of the NO_x CEM was calculated to be 18.3% and 4.5% respectively. However, the NO_x analyzer did meet the ± 5 ppm criteria. Test data was recorded in the Data Assessment Report in the Appendix.

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F.

For the CGA, each monitor (NO and NO_x) was challenged three times with three independent audit standards: one zero standard of N_2, and two NIST traceable cylinders of NO gas at concentrations equal to 26% and 55% of the instrument span. The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

If you have any questions, please contact us.

Sincerely,

HORIZON ENGINEERING

Kurt D. Torgerson

cc: Frank Deaver, Deaver Environmental Group
Eric Spiering, Wacker Siltronic

attachments: Data Assessment Report
Field Data / Calculation sheet
Calibration Gas Certificates

SCOEPA00023048

Data Assessment Report

Client	Deaver Environmental Group	Period Ending Date	
Plant name	Wacker Siltronics		
Source Unit No.	NOx scrubbing system outlet	Date of Audit	08/07/96
Audited by	Kurt Torgerson and Joe Fiedler,	Horizon Engineering	

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero	Audit Point 1	Audit Point 2	
Cylinder ID No.			XC006159B	XC006129B	
Date of Certification			5/3/96	5/3/96	
Type of Certification			NIST-SRM	NIST-SRM	
Certified Audit Value			26.4	55.3	
% of Span Value			26%	55%	
CEMS Response Time	58 seconds				
Sampled for 2x response time, +					
CEMS Response Value	NO Analyzer / Model # CFA-311A Mfg# 568833012				**Time**
Run 1		2.30	27.40	54.20	1458/1501/1504
Run 2		2.30	27.50	55.10	1508/1511/1513
Run 3		2.50	27.50	55.60	1517/1520/1523
Average			27.47	54.97	
Accuracy, % difference			4.0%	-0.6%	
Accuracy, difference, ppm			1.1	-0.3	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	**8**
or,	ppm	**+/- 5**	+/- 5

CEMS Response Value	NOx Analyzer / Model # CFA-311A Mfg# 568833011				**Time**
Run 1		2.50	32.90	57.30	1458/1501/1504
Run 2		6.00	30.90	58.30	1508/1511/1513
Run 3		5.00	29.90	57.70	1517/1520/1523
Average			31.23	57.77	
Accuracy, % difference			18.3%	4.5%	
Accuracy, difference, ppm			4.8	2.5	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	**8**
or,	ppm	**+/- 5**	+/- 5

Comments

Heated Line Temp - 196 degrees F

Confirm Logbook Entry x

SCOEPA00023049

BOC GASES

4715 N E 78th Street
Vancouver WA 98665
Telephone (360) 695 1351
(503) 283 2561
FAX (360) 696-3975

774631

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5480
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted: 27 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC0061598 Size 152. CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	27 ppm	26.4 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By _____
Authorized Signature

WHITE Customer Copy

SCOEPA00023050

BOC GASES
1715 N.E 78th Street
Vancouver, WA 98665
telephone: 360 695 1267
503-283-2561
FAX 360-698-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5479
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted. 55 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC0006129B Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	55 ppm	55.3 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By
Authorized Signature

Check for OFF SPEC result.

WHITE - Customer Copy

SCOEPA00023051

Horizon Engineering

13585 N.E. Whitaker Way
Portland, Oregon 97230
503/255-5050 FAX# 503/255-0505

June 26, 1996

Mr. Tom McCue
Wacker Siltronics Corporation
P.O. Box 83180
Portland, Oregon 97283-0180

Dear Mr. McCue:

A Cylinder Gas Audit (CGA) of the NO_x Continuous Monitoring System (CEMS) on the NO_x scrubbing system was done on May 28, 1996. The results are attached. The system was tested to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for performance audits for CEMS.

Summary of Results

Both analyzers in the system met the acceptable accuracy criteria of less than 15% of the audit value. The accuracy of the NO CEM was calculated to be 5% and 1% for audit points 1 and 2; respectively. The accuracy of the NO_x CEM was calculated to be 3% for both audit points. Test data was recorded in the Data Assessment Report in the Appendix.

Sampling and Analytical Procedures

The work was done according to guidelines of the ODEQ Continuous Monitoring Manual that references EPA CFR 40, Pt. 60, Appendix B, Performance Specification 2 for NO_x, and Appendix F.

For the CGA, each monitor (NO and NO_x) was challenged three times with three independent audit standards: one zero standard of N_2, and two NIST traceable cylinders of NO gas at concentrations equal to 26% and 55% of the instrument span, or at one and at one-half times the permitted emission standard of 58 ppm The audit gas was introduced at the connection between the probe and the sample line with the CEMS in the normal operating configuration.

Accuracy was calculated from the average of the three measured values using calculations in Appendix F.

Discussion

The data should be valid in all respects; documentation for quality assurance checks is in the Appendix.

If you have any questions, please contact us.

Sincerely,

HORIZON ENGINEERING

David Rossman

David Rossman, P.E.

cc: Frank Deaver, Deaver Environmental Group

attachments: Data Assessment Report
Field Data
Calibration Gas Certificates
Test Plan

SCOEPA00023053

Data Assessment Report

Client	Deaver Environmental Group	Period Ending Date	
Plant name	Wacker Siltronics		
Source Unit No.	NOx scrubbing system outlet	Date of Audit	May 28, 1996
Audited by	Kurt Torgerson and William Kroll, Horizon Engineering		

CEMS Information:

Manufacturer	Horiba	Type:	NDIR w/Cross Flow Modulation
Model No.	ENDA-1330		Trimer Corp.
Serial No.	0439	Location:	NOx Control Room
Applicable Regulations:			

Cylinder Gas Audit (CGA) for:

Pollutant NOx Units ppm

Span Value 100

		Zero	Audit Point 1	Audit Point 2	
Cylinder ID No.			XC006159B	XC006129B	
Date of Certification			5/3/96	5/3/96	
Type of Certification			NIST-SRM	NIST-SRM	
Certified Audit Value			26.4	55.3	
% of Span Value			26%	55%	
CEMS Response Time	58 seconds				
Sampled for 2x response time, +					
CEMS Response Value	NO Analyzer / Model # CFA-311A Mfg# 568833012				**Time**
Run 1		2.60	27.80	55.60	1458/1501/1504
Run 2		2.90	27.80	55.60	1508/1511/1513
Run 3		2.70	27.70	55.70	1517/1520/1523
Average			27.77	55.63	
Accuracy, % difference			5.2%	0.6%	
Accuracy, difference, ppm			1.4	0.3	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	**8**
or,	ppm	**+/- 5**	+/- 5

CEMS Response Value	NOx Analyzer / Model # CFA-311A Mfg# 568833011				**Time**
Run 1		2.00	28.90	58.20	1458/1501/1504
Run 2		3.80	29.80	58.30	1508/1511/1513
Run 3		3.60	30.40	58.80	1517/1520/1523
Average			29.70	58.43	
Accuracy, % difference			12.5%	5.7%	
Accuracy, difference, ppm			3.3	3.1	

Criteria for excessive inaccuracy: the greater of these two values:

15% of audit value	ppm	4	**8**
or,	ppm	**+/- 5**	+/- 5

Comments

Heated Line Temp - 196 degrees F

Confirm Logbook Entry x

SCOEPA00023054

WACKER CGA AUDITS.

DATE: 28 MAY, 1996

TIME: 1458/1504/1508/1511/1513/1517/1520/1523

1) 3 RUNS OF A ZERO ____

MID ____ 0.5X STANDARD

HIGH ____ 1.0X STANDARD

RUN #	ZERO	MID (26.4 ppm NO)	HIGH (55.3)	
1 NO	2.6	27.8	55.6	response Time:
NOx	2.0	28.9	58.2	58 sec.
2 NO	2.9	27.8	55.6	
NOx	3.8	29.8	58.3	
3 NO	2.7	27.7	55.7	
NOx	3.6	30.4	58.8	

HEATED LINE TEMP – 196°F

SAMPLED FOR 2X RESPONSE TIME + 1 ____ UNTIL STABLE

CONFIRM LOGBOOK ENTRY.

BOC GASES

4715 N.E. 78th Street
Vancouver WA 98665
Telephone 360-695 1257
503 283 2561
FAX 360-696-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5480
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted: 27 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC0061598 Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	27 ppm	26.4 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By [signature]
Authorized Signature

WHITE Customer Copy

BOC GASES

1715 N.E. 78th Street
Vancouver, WA 98665
Telephone: 360-695-1267
503-283-2561
FAX 360-696-3975

774634

ANALYTICAL REPORT

To: Byrnes

Date Reported: 05-03-96
Test Number: 5479
Fill Date: 05-01-96
Expire Date: 05-01-98
Product Vol: 140 cf

Material Submitted: 55 ppm NO in Nitrogen

Specification Number: BOC Specifications

Method of Analysis: Chemiluminescence

Analyzed: Cylinder No. XC0061298 Size 152, CGA 660 2000 psi

Component	Specification	Concentration
Nitric Oxide	55 ppm	55.3 ppm
Nitrogen	Balance	Balance

Analytical Accuracy = +/- 1% relative

Traceable to NIST SRM 2629A

By _____
Authorized Signature

Check for OFF SPEC result.

WHITE - Customer Copy

SCOEPA00023057

Horizon Engineering

13585 N.E. Whitaker Way
Portland, Oregon 97230
503/255-5050 FAX# 503/255-0505

April 19, 1996

David Sellers
Oregon Department of Environmental Quality
2020 S.W. 4th, Suite 400
Portland, OR 97201

Re: CGA, Wacker Siltronics Corporation
7200 N.W. Front
P.O. Box 83180
Portland, OR 97283-0180

This correspondence is notice that Horizon Engineering is to do a Cylinder Gas Audit (CGA) for the NO_x scrubbing system outlet at the above-referenced facility, scheduled for May 28, 1996. The purpose of this testing is to meet requirements for a continuous emission monitoring system. Per DEQ requirements we will challenge the NO_x CEMS three times with certified gases at 1 and 0.5 times the emission limit.

1. **Horizon Engrg. Contacts:**		David Rossman or Kurt Torgerson (503) 255-5050
	Fax	(503) 255-0505
2. **Source Site Personnel:**		Tom McCue (503) 243-2020
	Fax	(503) 241-7599
3. **Regulatory Contacts:**		David Sellers (503) 229-6991
	Fax	(503) 229-6957

The Department will be notified of any changes in plans prior to the audit. It is recognized that significant changes not acknowledged, which could affect accuracy and reliability of the results, could result in report rejection. Documentation of the procedures and results will be presented in the report for review.

Results will be submitted to you within 30 days of the completion of the field work, unless another deadline has been stipulated.

Two (2) copies of the completed report should be sent to you, by Mr. McCue, at the address above.

Any questions or comments relating to this audit should be directed to me.

SCOEPA00023058

Sincerely,

HORIZON ENGINEERING

David Rossman

David R. Rossman, P.E.

cc: Tom McCue, Wacker Siltronics
Frank Deaver, Deaver Environmental Group, Inc.

SCOEPA00023059

Horizon Engineering

13585 N.E. Whitaker Way
Portland, Oregon 97230
503/255-5050 FAX# 503/255-0505

SOURCE EVALUATION REPORT

WACKER SILTRONICS CORPORATION

NO_x Scrubber System Outlet
Total Nitrogen Oxides
CEMS Relative Accuracy Test

February 28, 1996

Prepared for

Deaver Environmental Group, Inc.
7900 S.W. Barnard Drive
Beaverton, OR 97007

by
Joe D. Fiedler
&
David R. Rossman, P.E.

Expires 12/31/96

SCOEPA00023060

Introduction

Relative accuracy (RA) tests were made to confirm the accuracy of the continuous emission monitoring system (CEMS) for nitrogen oxides (NO_x), volume flow rate, and emission rate from the NO_x scrubber at Wacker Siltronics plant in Portland, Oregon.

The system was tested on February 28, 1996, to satisfy the Oregon Department of Environmental Quality (ODEQ) Discharge Permit requirement for relative accuracy testing.

The field work was done by Horizon Engineering personnel Kurt Torgerson and Brian Fallon. Frank Deaver, of Deaver Environmental Group, Inc., arranged for the tests. Tom McCue was the site contact person at Wacker Siltronics and he coordinated plant operation and data acquisition for the CEMS. Jack Herbert and David Sellers represented the ODEQ on the test day.

This testing was scheduled to be completed on two previous dates but was postponed. Field personnel went to the site on February 8, but there was concern that the Willamette River would flood the plant that day so the test was delayed. On February 20, the relative accuracy tests were started but there was a problem with the Wacker CEMS and it was decided to delay again until the system was repaired.

Summary of Results

The results show that the NO_x monitoring system meets the performance standards in terms of the RA (maximum allowed difference) of less than 20%. Table 1 summarizes the results of the RA testing. Although the results of all runs in a set must be reported, the standards allow the use of the best nine runs in determining RA between the CEMS and the Reference Method (RM). The results were acceptable when all tests were used in the calculation or when the best nine tests were used.

SCOEPA00023061

Table 1
Relative Accuracy Test Results

NO_x Scrubber Outlet
Test Date: February 28, 1996

	Relative Accuracy All 12 Runs	Relative Accuracy Best 9 Runs
NO_x Concentration (ppmv)		
Actual difference	1.2	1.2
RA based on mean value (%)	17.6	16.5

	Relative Accuracy All 12 Runs	Relative Accuracy Best 9 Runs
Volume Flow Rate (dscf/min)		
Actual difference	457	323
RA based on mean value (%)	5.2	4.5

	Relative Accuracy All 12 Runs	Relative Accuracy Best 9 Runs
NO_x Emission Rate (lbm/hr)		
Actual difference	.09	.08
RA based on mean value (%)	15.4	12.2
RA allowable, based on mean value (%)	20	20

Average NO_x Emission Rate, lb/hr	0.83
Allowable NO_x Emission Rate, lb/hr*	5.4

* Permit limit cited is based on 130 lb/day for "wafer manufacturing process"

SCOEPA00023062

Description of the Source and its Operation

NO_x contaminated air is pulled through three packed bed chemical scrubbers by a fan located upstream from the sampling port and downstream from the last scrubber. The liquid chemicals and gaseous NO_x/air mixture flow in different directions and have a high residence time in the scrubbers due to the packed beds. This residence time is sufficient to reduce the NO_x emissions well below Permit standards.

Sampling and Analytical Procedures

General The work was done according to guidelines of Performance Specification 2 (CFR 40, Pt. 60, Appendix B) for NO_x. EPA Reference Method 7E was used to determine NO_x with EPA Methods 1 and 2 and ODEQ Method 4 for determining the system flow rate. The RA testing consisted of twelve 25-minute sampling runs (21 minutes plus twice the response time of the system).

The table below describes the gas analyzer used for the method.

Reference Method Analyzer

Gas	Brand	Model	Range	Measurement Method
NO_x	TECO	10A/R	0-250	Chemiluminescent

A probe was prepared for the testing by drilling holes at three points (16.7%, 50%, 83.3% of stack diameter) as specified in the method. Gas sample was drawn into an ice-water bath condenser (to remove moisture) by a Teflon lined sample pump and was pulled through a 75 ft. Teflon umbilical to the instrument van on the ground.

The NO_x analyzer was first calibrated with certified calibration gas. Then the entire sampling system was verified by introducing calibration gas near the sampling probe inlet. This bias check was conducted before and after every test run. The results of all calibrations are included in the Appendix.

Data The analyzer output was read every five seconds during the tests by a Rustrak Ranger II data logger. Printouts of the plots from the data logger are in the Appendix.

After the completion of all the testing, data sets from the plant CEMS were generated and passed along to us by the Wacker technicians.

Calculations The data sets were compared using the formulas in Performance Specification 2. Results worksheets, in the Appendix, include calculations using all test data sets and are repeated using only the nine data sets that had the best agreement.

Discussion

As noted, the results of the tests show that the NO_x CEMS is operating within the allowable specifications. All Reference Method instrument calibrations and all testing parameters were within specifications. Measured emissions for the 12 tests averaged 0.83 lb/hr. The Permit limit for the source is about 5.4 lb/hr (based on the daily allowable rate).

APPENDIX

Gases

- RA Results
- Wacker Siltronics Data
- Data Logger Plots
- Drift Corrections
- Calibration Documentation

Flow Rates

- Calculations
- Field Data

Calibration Gas Certificates

Administrative

- Test Plan
- DEQ Approval
- DEQ Air Quality Permit

SCOEPA00023065

Wacker Siltronic Corporation

WACKER

TO: Tom McCue

FROM: Dave Locke

SUBJECT: NOx SCRUBBER DATA ERROR

DATE: February 13, 1996

Yesterday I noted an unusual trend of NOx and NO on the operator screen. The apparent problem was signified by the trends zeroing-out too high on the trend graph.

I concluded that it may have been the result of a calibration error. In checking the valving and regulators in the gas cabinet, I noticed that the regulator for one of the calibration gases was set for too low of a delivery pressure required by the analyzer.

After a response from maintenance, the Horiba Analyzer was correctly recalibrated.

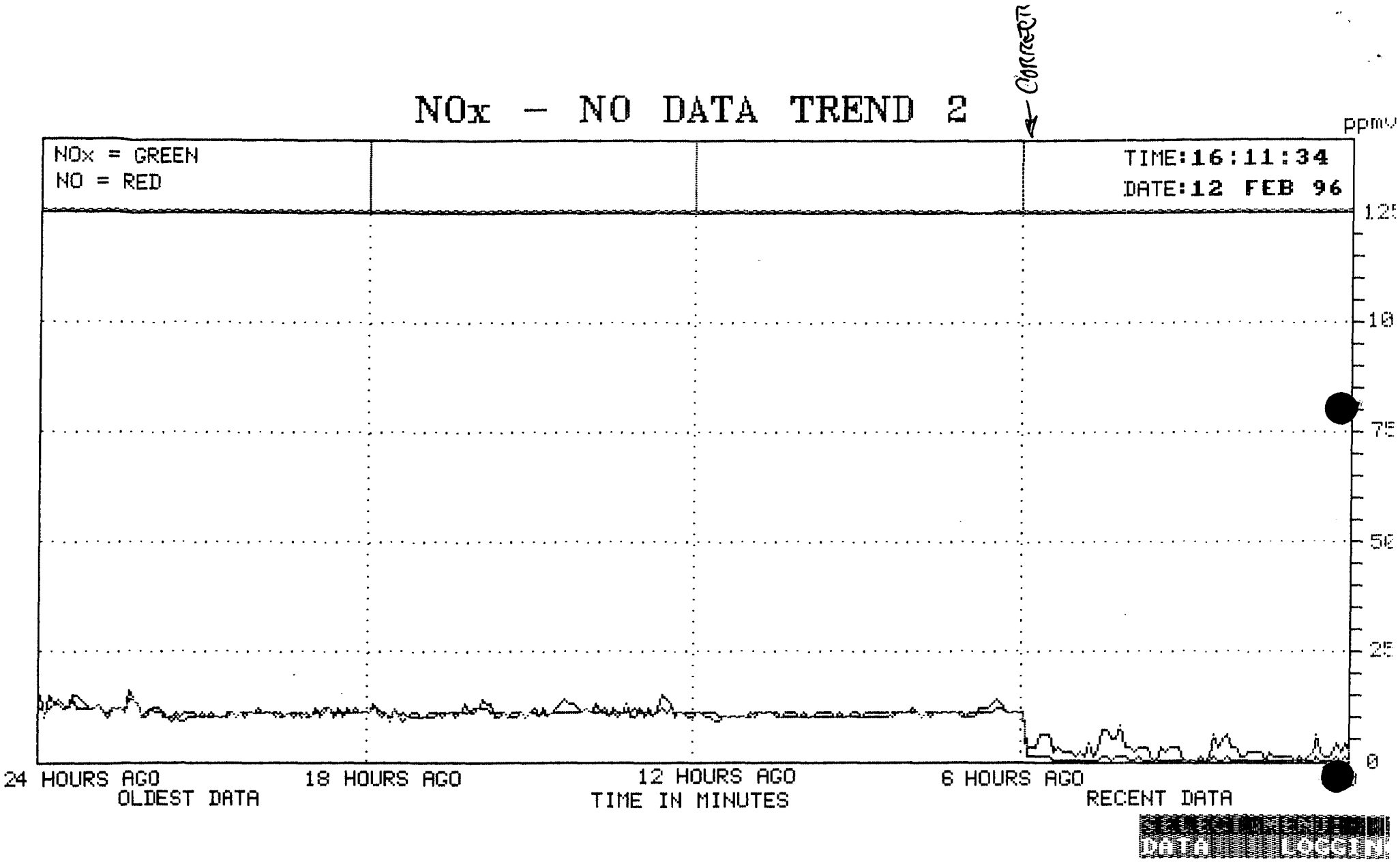
I estimate that the error is as follows: The readings displayed and recorded by the CEM were as much as 11 ppm higher than actual.

Attached is "minute" data from 2/11/96 that shows the error in the trend beginning approximately 12:30pm. This trend error lasted until about 10:15am 2/12/96, as shown by the trend plot, also attached.

In checking the NOx CEM this morning, everything was operating correctly and as normal.

If there is any other information I can provide, please let me know.

NOx - NO DATA TREND 2



Log File Report - Time/Date for 02/11/96 12:15:00 to 02/11/96 13:30:00
FORM NAME: MINLOG FILE NAME: C:\LOGS\1MIN.D27 TYPE: DAILY
 Tue Feb 13 09:0[redacted]29 1996

RECO	DATE	TIME	LABEL	DATA	LABEL	DATA	LABEL	DATA	LABEL	DATA
737	02/11/96	12:15:58	NOx =	5	NO =	2	SCFM=	13290	TEMP=	72
738	02/11/96	12:16:59	NOx =	4	NO =	2	SCFM=	13238	TEMP=	72
739	02/11/96	12:17:58	NOx =	4	NO =	2	SCFM=	13343	TEMP=	72
740	02/11/96	12:18:58	NOx =	3	NO =	2	SCFM=	13290	TEMP=	72
741	02/11/96	12:19:59	NOx =	4	NO =	2	SCFM=	13290	TEMP=	72
742	02/11/96	12:20:58	NOx =	3	NO =	2	SCFM=	13290	TEMP=	72
743	02/11/96	12:21:58	NOx =	3	NO =	3	SCFM=	13395	TEMP=	72
744	02/11/96	12:22:58	NOx =	3	NO =	2	SCFM=	13290	TEMP=	72
745	02/11/96	12:23:58	NOx =	3	NO =	2	SCFM=	13343	TEMP=	72
746	02/11/96	12:24:59	NOx =	3	NO =	2	SCFM=	13290	TEMP=	72
747	02/11/96	12:25:57	NOx =	3	NO =	2	SCFM=	13395	TEMP=	72
748	02/11/96	12:26:57	NOx =	4	NO =	2	SCFM=	13343	TEMP=	72
749	02/11/96	12:27:58	NOx =	4	NO =	2	SCFM=	13290	TEMP=	72
750	02/11/96	12:28:57	NOx =	5	NO =	2	SCFM=	13448	TEMP=	72
751	02/11/96	12:29:57	NOx =	5	NO =	3	SCFM=	13290	TEMP=	72
752	02/11/96	12:30:57	NOx =	4	NO =	3	SCFM=	13395	TEMP=	72
753	02/11/96	12:31:57	NOx =	3	NO =	3	SCFM=	13290	TEMP=	72
754	02/11/96	12:32:57	NOx =	4	NO =	3	SCFM=	13238	TEMP=	72
755	02/11/96	12:33:56	NOx =	4	NO =	2	SCFM=	13290	TEMP=	72
756	02/11/96	12:34:57	NOx =	4	NO =	3	SCFM=	13343	TEMP=	72
757	02/11/96	12:35:56	NOx =	3	NO =	2	SCFM=	13395	TEMP=	72
758	02/11/96	12:36:56	NOx =	3	NO =	3	SCFM=	13395	TEMP=	72
759	02/11/96	12:37:57	NOx =	4	NO =	2	SCFM=	13395	TEMP=	72
760	02/11/96	12:38:55	NOx =	3	NO =	2	SCFM=	13395	TEMP=	72
761	02/11/96	12:39:56	NOx =	4	NO =	2	SCFM=	13395	TEMP=	72
762	02/11/96	12:40:55	NOx =	5	NO =	3	SCFM=	13290	TEMP=	72
763	02/11/96	12:41:56	NOx =	5	NO =	3	SCFM=	13343	TEMP=	72
764	02/11/96	12:42:55	NOx =	6	NO =	3	SCFM=	13395	TEMP=	72
765	02/11/96	12:43:56	NOx =	6	NO =	3	SCFM=	13395	TEMP=	72
766	02/11/96	12:44:56	NOx =	5	NO =	3	SCFM=	13238	TEMP=	72
767	02/11/96	12:45:55	NOx =	5	NO =	3	SCFM=	13395	TEMP=	72
768	02/11/96	12:46:55	NOx =	6	NO =	3	SCFM=	13395	TEMP=	72
769	02/11/96	12:47:56	NOx =	7	NO =	3	SCFM=	13395	TEMP=	72
770	02/11/96	12:48:55	NOx =	9	NO =	3	SCFM=	13395	TEMP=	72
771	02/11/96	12:49:55	NOx =	10	NO =	3	SCFM=	13395	TEMP=	72
772	02/11/96	12:50:54	NOx =	12	NO =	4	SCFM=	13395	TEMP=	72
773	02/11/96	12:51:55	NOx =	11	NO =	4	SCFM=	13343	TEMP=	72
774	02/11/96	12:52:55	NOx =	11	NO =	5	SCFM=	13448	TEMP=	72
775	02/11/96	12:53:54	NOx =	12	NO =	5	SCFM=	13395	TEMP=	72
776	02/11/96	12:54:55	NOx =	11	NO =	6	SCFM=	13448	TEMP=	72
777	02/11/96	12:55:54	NOx =	12	NO =	6	SCFM=	13290	TEMP=	72
778	02/11/96	12:56:54	NOx =	11	NO =	7	SCFM=	13395	TEMP=	72
779	02/11/96	12:57:54	NOx =	12	NO =	8	SCFM=	13395	TEMP=	72
780	02/11/96	12:58:53	NOx =	12	NO =	8	SCFM=	13395	TEMP=	72
781	02/11/96	12:59:54	NOx =	12	NO =	9	SCFM=	13395	TEMP=	72
782	02/11/96	13:00:53	NOx =	12	NO =	10	SCFM=	13395	TEMP=	72
783	02/11/96	13:01:53	NOx =	12	NO =	10	SCFM=	13290	TEMP=	72
784	02/11/96	13:02:54	NOx =	12	NO =	11	SCFM=	13395	TEMP=	72
785	02/11/96	13:03:52	NOx =	11	NO =	11	SCFM=	13395	TEMP=	72

RECO	DATE	TIME	LABEL	DATA	LABEL	DATA	LABEL	DATA	LABEL	DATA
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787	02/11/96	13:05:53	NOx =	11	NO =	11	SCFM=	13343	TEMP=	72
788	02/11/96	13:06:52	NOx =	11	NO =	10	SCFM=	13343	TEMP=	72
789	02/11/96	13:07:53	NOx =	11	NO =	10	SCFM=	13343	TEMP=	72
790	02/11/96	13:08:52	NOx =	11	NO =	11	SCFM=	13290	TEMP=	72
791	02/11/96	13:09:52	NOx =	11	NO =	10	SCFM=	13395	TEMP=	72
792	02/11/96	13:10:53	NOx =	10	NO =	10	SCFM=	13290	TEMP=	72
793	02/11/96	13:11:52	NOx =	10	NO =	11	SCFM=	13395	TEMP=	72
794	02/11/96	13:12:53	NOx =	10	NO =	10	SCFM=	13395	TEMP=	72
795	02/11/96	13:13:51	NOx =	10	NO =	11	SCFM=	13395	TEMP=	72
796	02/11/96	13:14:52	NOx =	10	NO =	11	SCFM=	13290	TEMP=	73
797	02/11/96	13:15:52	NOx =	11	NO =	11	SCFM=	13290	TEMP=	73
798	02/11/96	13:16:51	NOx =	13	NO =	13	SCFM=	13290	TEMP=	73
799	02/11/96	13:17:52	NOx =	14	NO =	13	SCFM=	13395	TEMP=	73
800	02/11/96	13:18:51	NOx =	15	NO =	13	SCFM=	13290	TEMP=	73
801	02/11/96	13:19:51	NOx =	16	NO =	13	SCFM=	13290	TEMP=	73
802	02/11/96	13:20:52	NOx =	14	NO =	13	SCFM=	13290	TEMP=	73
803	02/11/96	13:21:51	NOx =	14	NO =	13	SCFM=	13290	TEMP=	73
804	02/11/96	13:22:51	NOx =	16	NO =	13	SCFM=	13395	TEMP=	73
805	02/11/96	13:23:50	NOx =	15	NO =	13	SCFM=	13395	TEMP=	73
806	02/11/96	13:24:50	NOx =	14	NO =	13	SCFM=	13290	TEMP=	73
807	02/11/96	13:25:51	NOx =	14	NO =	13	SCFM=	13290	TEMP=	73
808	02/11/96	13:26:50	NOx =	16	NO =	13	SCFM=	13290	TEMP=	73
809	02/11/96	13:27:50	NOx =	16	NO =	13	SCFM=	13343	TEMP=	73
810	02/11/96	13:28:51	NOx =	17	NO =	13	SCFM=	13290	TEMP=	73
811	02/11/96	13:29:50	NOx =	18	NO =	13	SCFM=	13290	TEMP=	73

Log File Report - Time/Date for 02/11/96 13:30:00 to 02/11/96 14:09:00
FORM NAME: MINLOG FILENAME: C:\LOGS\IMIN.D27 TYPE: DAILY
Page 1 Tue Feb 13 09:[redacted]28 1996

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813	02/11/96	13:31:49	NOx =	15	NO =	14	SCFM=	13290	TEMP=	72
814	02/11/96	13:32:50	NOx =	13	NO =	13	SCFM=	13290	TEMP=	72
815	02/11/96	13:33:50	NOx =	13	NO =	13	SCFM=	13343	TEMP=	73
816	02/11/96	13:34:49	NOx =	14	NO =	13	SCFM=	13290	TEMP=	73
817	02/11/96	13:35:50	NOx =	14	NO =	13	SCFM=	13395	TEMP=	73
818	02/11/96	13:36:49	NOx =	14	NO =	13	SCFM=	13290	TEMP=	73
819	02/11/96	13:37:49	NOx =	14	NO =	12	SCFM=	13290	TEMP=	73
820	02/11/96	13:38:49	NOx =	15	NO =	13	SCFM=	13448	TEMP=	73
821	02/11/96	13:39:48	NOx =	15	NO =	13	SCFM=	13395	TEMP=	73
822	02/11/96	13:40:49	NOx =	16	NO =	13	SCFM=	13343	TEMP=	73
823	02/11/96	13:41:48	NOx =	15	NO =	13	SCFM=	13290	TEMP=	73
824	02/11/96	13:42:49	NOx =	14	NO =	13	SCFM=	13290	TEMP=	73
825	02/11/96	13:43:49	NOx =	16	NO =	13	SCFM=	13343	TEMP=	73
826	02/11/96	13:44:48	NOx =	15	NO =	13	SCFM=	13290	TEMP=	73
827	02/11/96	13:45:48	NOx =	17	NO =	14	SCFM=	13290	TEMP=	73
828	02/11/96	13:46:47	NOx =	11	NO =	11	SCFM=	13290	TEMP=	73
829	02/11/96	13:47:48	NOx =	12	NO =	11	SCFM=	13290	TEMP=	73
830	02/11/96	13:48:48	NOx =	12	NO =	11	SCFM=	13395	TEMP=	73
831	02/11/96	13:49:47	NOx =	11	NO =	11	SCFM=	13290	TEMP=	73
832	02/11/96	13:50:47	NOx =	11	NO =	11	SCFM=	13343	TEMP=	73
833	02/11/96	13:51:49	NOx =	11	NO =	11	SCFM=	13343	TEMP=	73
834	02/11/96	13:52:47	NOx =	11	NO =	11	SCFM=	13290	TEMP=	73
835	02/11/96	13:53:48	NOx =	13	NO =	11	SCFM=	13395	TEMP=	73
836	02/11/96	13:54:46	NOx =	10	NO =	11	SCFM=	13290	TEMP=	73
837	02/11/96	13:55:48	NOx =	10	NO =	11	SCFM=	13290	TEMP=	73
838	02/11/96	13:56:47	NOx =	10	NO =	10	SCFM=	13290	TEMP=	73
839	02/11/96	13:57:47	NOx =	11	NO =	11	SCFM=	13290	TEMP=	73
840	02/11/96	13:58:47	NOx =	10	NO =	11	SCFM=	13238	TEMP=	73
841	02/11/96	13:59:46	NOx =	11	NO =	11	SCFM=	13343	TEMP=	73

Analytical data from North Creek Analtical for 1996
reports gotten from Tom Rothschild

valus in ppb

CE parshall flume data			OWW Second stage grab				MGD	
	Acetone			Acetone	IPA			
Date	Result	MRL	Date	(ppb)	(ppb)	month	CE Flows	OWW flows
09-Jan	81	25	02-Mar	320		jan	10.54	8.641
09-Feb	57		09-Apr	1600	19000	feb	10.818	8.665
04-Mar	120		02-May	590	7900	mar	11.9	9.738
09-Apr	26		06-Jun	600	3300	apr	13.881	12.475
02-May	350		17-Jul	2100		may	23.341	13.872
06-Jun	37		31-Jul	420		jun	18.439	19.074
17-Jul	130		08-Jul	390		jul	19.25	23.414
18-Sep	32		14-Aug	550		aug	20.474	23.13
09-Sep	46		18-Sep	340		sep	17.607	20.613
09-Oct	43		09-Oct	170		oct	18.625	16.435
05-Nov	106		05-Nov	391		nov	18.709	17.029
04-Dec	96		02-Dec	158		dec	18.325	20.75
Avg:	93.66667		Avg:	635.75	10066.67	total	201.909	193.836

POTW flows: (from OWW system)
193836000 gallons for the year
16153000 per month, assuming flow is consistant

River flows: (from WAD system)
201909000 gallons for the year
16825750 per month, assuming flow is consistant

calculating for monthly amount of acetone to POTW:

635.75 galAcetone	16153000 galwater	6.59 lbAcetone	67.67 lbAcetone	
1E+09 galWater	month	galAcetone	month	

calculating for monthly amount of acetone to RIVER:

93.66667 galAcetone	16825750 galwater	6.59 lbAcetone	10.39 lbAcetone	78.06 lbAcetone / month
1E+09 galWater	month	galAcetone	month	

calculating for monthly amount of IPA to POTW:

10066.67 galIPA	16153000 galwater	6.59 lbIPA	1071.58 lbIPA	1149.64 lb VOC / month to waste water
1E+09 galWater	month	galIPA	month	

18795.65 lb VOC / year to wastewater

6.9 tons / yr

VOCCALCS.W96 02/11

Amount of VOC shipped off as waste (98% IPA, 2% acetone (Mixed Alcohols waste)

Date	lbs	Avg lbs/day	Avg lbs for 30 days	Avg lbs/month
28-Feb	366.96	--		
27-Mar	366.96	13.59	407.73	409.98
22-May	733.92	13.11	393.17	
26-Jun	366.96	10.48	314.54	
24-Jul	366.96	13.11	393.17	
14-Aug	366.96	17.47	524.23	
11-Sep	800.64	28.59	857.83	
17-Oct	366.96	10.19	305.80	
03-Dec	366.96	2.78	83.40	
total	4103.28			

IPA lbs	Acetone lbs
401.78	8.20

Clenvex waste (367lbs/dr)

Date	lbs	drums	month total
31-Jan	734	2	
28-Feb	1101	3	
14-Mar	2936	8	3486.5
27-Mar	550.5	1.5	
05-Jun	1468	4	4771
19-Jun	2202	6	
26-Jun	1101	3	
17-Jul	1835	5	2202
24-Jul	367	1	
01-Aug	2202	6	3670
07-Aug	1468	4	
18-Sep	1468	4	
24-Oct	99.09	0.27	
Total lbs:	17531.59		
total tons	8.8		
lbs/month	1460.97		

Yearly totals:

IPA	Acetone	
17680	1035	=lbs
2679	157	=gallons

Total VOC to Wastes 18715.48 =lbs (does not include Clenvex)

Cleaning solvent from maintenance shop:

Date	lbs	avg lbs/shipment	lbs/month
08-May	166.8	200.16	66.72
26-Jun	300.24		
03-Dec	233.52	333.6	
31-Dec	100.08		

Total : 800.64

using specific gravity of alcohols as 0.8

quantities shipped as waste

17531.59 + 800.64 + 4103.28 Annual amount of VOC waste collected.
= 22435 lbs = 11.2 tons

Therefore: if 1% evaporates (assumption)
then we used 808 lbs

734	JAN	1883.64
1467.96	FEB	2617.6
3853.46	MAR	5003.1
0	APR	1149.64
900.72	MAY	2050.36
5438.2	JUN	0587.84
2568.9	JUL	3718.54
4036.96	AUG	6186.6
2268.64	SEP	3418.28
466.05	OCT	1615.69
0	NOV	1149.64
700.56	DEC	1850.2

lbs VOC collected as waste or in wastewater per month

lbs VOC collected as waste - not incl. wastewater

TOTAL: 22435.45 lbs

TOTAL: 36236.13 lbs

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Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P601104
Matrix: water
Received: 01/10/96
Sampled: 01/09/96
Prepared: 01/16/96
Analyzed: 01/16/96

Client ID	Lab ID	Analyte	Result	MRL
96-1 FAB 1 CE grab	P601104-1	Acetone	81	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	6.0	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023073

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Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: CE FOR EPA 8240

NCA Project #: P602117
Matrix: water
Received: 02/09/96
Sampled: 02/09/96
Prepared: 02/12/96
Analyzed: 02/12/96

Client ID	Lab ID	Analyte	Result	MRL
96-5 Fab1 CE grab	P602117-1	Acetone	57	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	5.2	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023074

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Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P603027
Matrix: water
Received: 03/04/96
Sampled: 03/04/96
Prepared: 03/06/96
Analyzed: 03/06/96

Client ID	Lab ID	Analyte	Result	MRL
96-20	P603027-3	Acetone	120	25
CE grab		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	5.9	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	7.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023075

NORTH CREEK ANALYTICAL
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Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P603027
Matrix: water
Received: 03/04/96
Sampled: 03/02/96
Prepared: 03/06/96
Analyzed: 03/06/96

Client ID	Lab ID	Analyte	Result	MRL
96-19	P603027-2	Acetone	ND	25
WAD, 3rd Stage		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	6.1	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	7.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023076

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P603027
Matrix: water
Received: 03/04/96
Sampled: 03/02/96
Prepared: 03/06/96
Analyzed: 03/06/96

Client ID	Lab ID	Analyte	Result	MRL
96-18 *1 OWW, 2nd Stage	P603027-1	Acetone	320	130
		Acrolein	ND	1000
		Acrylonitrile	ND	50
		Benzene	ND	10
		Bromodichloromethane	ND	10
		Bromoform	ND	10
		Bromomethane	ND	50
		2-Butanone	ND	130
		Carbon Disulfide	ND	10
		Carbon Tetrachloride	ND	10
		Chlorobenzene	ND	10
		Chloroethane	ND	50
		Chloroform	ND	10
		Chloromethane	ND	50
		Dibromochloromethane	ND	10
		Dibromomethane	ND	10
		1,4-Dichloro-2-butene	ND	50
		1,2-Dichlorobenzene	ND	10
		1,3-Dichlorobenzene	ND	10
		1,4-Dichlorobenzene	ND	10
		Dichlorodifluoromethane	ND	25
		1,1-Dichloroethane	ND	10
		1,2-Dichloroethane	ND	10
		1,1-Dichloroethene	ND	10
		cis-1,2-Dichloroethene	ND	10
		trans1,2Dichloroethene	ND	10
		1,2-Dichloropropane	ND	10
		cis-1,3-Dichloropropene	ND	10
		trans1,3Dichloropropene	ND	10
		Ethyl Methacrylate	ND	10
		Ethylbenzene	ND	10
		2-Hexanone	ND	25
		Iodomethane	ND	10
		4-Methyl-2-pentanone	ND	25
		Methylene Chloride	ND	35
		Styrene	ND	10
		1,1,2,2-Tetrachloroethane	ND	10
		Tetrachloroethene	ND	10
		Toluene	ND	10
		1,1,1-Trichloroethane	ND	10

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

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Alcohols by Headspace Analysis (GC/FID)
Results In mg/L (ppm)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P604144
Matrix: water
Sampled: 04/09/96
Received: 04/09/96

Client ID	Lab ID	Analyte	Results	MRL	Date Prepared	Date Analyzed
96-22 OWW	P604144-1	Ethanol	ND	10	04/15/96	04/15/96

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023078

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P604144
Matrix: water
Received: 04/09/96
Sampled: 04/09/96
Prepared: 04/11/96
Analyzed: 04/11/96

Client ID	Lab ID	Analyte	Result	MRL
96-22 OWW	P604144-1	Acetone	1600	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	4.9	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	16

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023079

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P604144
Matrix: water
Received: 04/09/96
Sampled: 04/09/96
Prepared: 04/11/96
Analyzed: 04/11/96

Client ID	Lab ID	Analyte	Result	MRL
96-22 OWW (continued)	P604144-1			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0
		Isopropanol	19000	200

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023080

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P604144
Matrix: water
Received: 04/09/96
Sampled: 04/09/96
Prepared: 04/11/96
Analyzed: 04/11/96

Client ID	Lab ID	Analyte	Result	MRL
96-23 CE	P604144-2	Acetone	26	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	6.3	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	16

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023081

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Alcohols by Headspace Analysis (GC/FID)
Results In mg/L (ppm)

Client: Wacker Siltronic Corporation
Project: TTO

NCA Project #: P605049
Matrix: water
Sampled: 05/02/96
Received: 05/03/96

Client ID	Lab ID	Analyte	Results	MRL	Date Prepared	Date Analyzed
96-28-OWW	P605049-2	Ethanol	ND	10	05/09/96	05/09/96

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023082

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: TTO

NCA Project #: P605049
Matrix: water
Received: 05/03/96
Sampled: 05/02/96
Prepared: 05/13/96
Analyzed: 05/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-27-FAB-1	P605049-1	Acetone	350	25
CE GRAB		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	7.9	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023083

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: TTO

NCA Project #: P605049
Matrix: water
Received: 05/03/96
Sampled: 05/02/96
Prepared: 05/13/96
Analyzed: 05/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-27-FAB-1 (continued)	P605049-1			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023084

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: TTO

NCA Project #: P605049
Matrix: water
Received: 05/03/96
Sampled: 05/02/96
Prepared: 05/13/96
Analyzed: 05/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-28-OWW	P605049-2	Acetone	590	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	4.5	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023085

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: TTO

NCA Project #: P605049
Matrix: water
Received: 05/03/96
Sampled: 05/02/96
Prepared: 05/13/96
Analyzed: 05/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-28-OWW (continued)	P605049-2			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0
		Isopropanol	7900	200

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023086

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: TTO

NCA Project #: P605049
Matrix: water
Received: 05/03/96
Sampled: 05/02/96
Prepared: 05/13/96
Analyzed: 05/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-29-FAB-2	P605049-3	Acetone	27	25
		Acrolein	ND	200
WAD III stage		Acrylonitrile	ND	10
(CE Grab)		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	ND	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023087

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: TTO

NCA Project #: P605049
Matrix: water
Received: 05/03/96
Sampled: 05/02/96
Prepared: 05/13/96
Analyzed: 05/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-29-FAB-2 (continued)	P605049-3			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023088

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-39	P606092-9	Acetone	37	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	5.6	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

Fab 1/ Fab 2
Flow Proportional
mix (CE)

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023089

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-39 (continued)	P606092-9			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0
		Isopropanol	ND	200

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023090

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-34	P606092-4	Acetone	600	25
Feb 1 OWW grab		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	5.2	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023091

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-34 (continued)	P606092-4			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0
		Isopropanol	3300	200

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023092

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-35	P606092-5	Acetone	550	25
Fab2 OWW grab		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	2.6	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023093

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-35 (continued)	P606092-5			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0
		Isopropanol	9400	200

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023094

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-36	P606092-6	Acetone	550	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
Fab1/ Fab2		Benzene	ND	2.0
Flow Proportional		Bromodichloromethane	ND	2.0
mix		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	3.5	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023095

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-36 (continued)	P606092-6			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0
		Isopropanol	5400	200

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023096

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-38	P606092-8	Acetone	ND	25
		Acrolein	ND	200
Fab 2 CE grab		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	ND	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023097

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-38 (continued)	P606092-8			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0
		Isopropanol	ND	200

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023098

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-37	P606092-7	Acetone	68	25
		Acrolein	ND	200
Fab 1 CE grab		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	7.3	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023099

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Received: 06/06/96
Sampled: 06/06/96
Prepared: 06/13/96
Analyzed: 06/13/96

Client ID	Lab ID	Analyte	Result	MRL
96-37 (continued)	P606092-7			
		1,1,2-Trichloroethane	ND	2.0
		Trichloroethene	ND	2.0
		Trichlorofluoromethane	ND	2.0
		1,2,3-Trichloropropane	ND	2.0
		Vinyl Acetate	ND	5.0
		Vinyl Chloride	ND	5.0
		Xylenes (total)	ND	2.0
		Isopropanol	290	200

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023100

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Alcohols by Headspace Analysis (GC/FID)
Results In mg/L (ppm)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P606092
Matrix: water
Sampled: 06/06/96
Received: 06/06/96

Client ID	Lab ID	Analyte	Results	MRL	Date Prepared	Date Analyzed
96-34 Fab1 OWW	P606092-4	Ethanol	ND	10	06/11/96	06/11/96
96-35 Fab2 OWW	P606092-5	Ethanol	ND	10	06/11/96	06/11/96
96-36 Fab1/Fab2 mix	P606092-6	Ethanol	ND	10	06/11/96	06/11/96
96-37 Fab1 CE	P606092-7	Ethanol	ND	10	06/11/96	06/11/96
96-38 Fab2 CE	P606092-8	Ethanol	ND	10	06/11/96	06/11/96
96-39 Fab1/Fab2 mix	P606092-9	Ethanol	ND	10	06/11/96	06/11/96

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023101

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

Offices:
BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P607337
Matrix: water
Received: 07/24/96
Sampled: 07/24/96
Prepared: 07/26/96
Analyzed: 07/26/96

Client ID	Lab ID	Analyte	Result	MRL
96-63 Fab2 CE 24hr composite	P607337-3	Acetone	250	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	4.0	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023102

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P607228
Matrix: water
Received: 07/17/96
Sampled: 07/17/96
Prepared: 07/24/96
Analyzed: 07/24/96

Client ID	Lab ID	Analyte	Result	MRL
96-58 CF, comp	P607228-4	Acetone	130	30
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	2.8	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023103

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ▪ (206) 481-9200 ▪ FAX 485-2992
SPOKANE ▪ (509) 924-9200 ▪ FAX 924-9290
PORTLAND ▪ (503) 643-9200 ▪ FAX 644-2202

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P607228
Matrix: water
Received: 07/17/96
Sampled: 07/17/96
Prepared: 07/24/96
Analyzed: 07/24/96

Client ID	Lab ID	Analyte	Result	MRL
96-57 Fab2 one 2nd stage	P607228-3	Acetone	2100	30
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	2.3	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023104

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

Offices:
BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P607445
Matrix: water
Received: 07/31/96
Sampled: 07/31/96
Prepared: 08/01/96
Analyzed: 08/01/96

Client ID	Lab ID	Analyte	Result	MRL
96-66 Fab2 OWW 2nd Stage grab	P607445-3	Acetone	420	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	4.4	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023105

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P607083
Matrix: water
Received: 07/08/96
Sampled: 07/08/96
Prepared: 07/11/96
Analyzed: 07/11/96

Client ID	Lab ID	Analyte	Result	MRL
96-52	P607083-2	Acetone	390	25
Fab 2 OWW grab		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	3.7	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023106

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P607083
Matrix: water
Received: 07/08/96
Sampled: 07/08/96
Prepared: 07/11/96
Analyzed: 07/11/96

Client ID	Lab ID	Analyte	Result	MRL
96-51	P607083-1	Acetone	35	25
Feb 2 CE grab		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	4.6	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023107

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Alcohols by Headspace Analysis (GC/FID)

Results In mg/L (ppm)

Client: Wacker Siltronic Corporation
Project:

NCA Project #: P607083
Matrix: water
Sampled: 07/08/96
Received: 07/08/96

Client ID	Lab ID	Analyte	Results	MRL	Date Prepared	Date Analyzed
96-52	P607083-2	Ethanol	ND	10	07/22/96	07/22/96
Feb 2 OWW grab		Isopropanol	8.2	5.0		

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023108

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:
Received: 08/14/1996

NCA Number: P608274
Matrix: water

Sample Name	Analyte	Result	MRL
96-88 OWW 2nd Stage	Acetone	550	25
	Acrolein	ND	200
	Acrylonitrile	ND	10
	Benzene	ND	2.0
	Bromodichloromethane	ND	2.0
	Bromoform	ND	2.0
	Bromomethane	ND	10
	2-Butanone	ND	25
	Carbon Disulfide	ND	2.0
	Carbon Tetrachloride	ND	2.0
	Chlorobenzene	ND	2.0
	Chloroethane	ND	10
	Chloroform	3.8	2.0
	Chloromethane	ND	10
	Dibromochloromethane	ND	2.0
	Dibromomethane	ND	2.0
	1,4-Dichloro-2-butene	ND	10
	1,2-Dichlorobenzene	ND	2.0
	1,3-Dichlorobenzene	ND	2.0
	1,4-Dichlorobenzene	ND	2.0
	Dichlorodifluoromethane	ND	5.0
	1,1-Dichloroethane	ND	2.0
	1,2-Dichloroethane	ND	2.0
	1,1-Dichloroethene	ND	2.0
	cis-1,2-Dichloroethene	ND	2.0
	trans1,2Dichloroethene	ND	2.0
	1,2-Dichloropropane	ND	2.0
	cis-1,3-Dichloropropene	ND	2.0
	trans1,3Dichloropropene	ND	2.0
	Ethyl Methacrylate	ND	2.0
	Ethylbenzene	ND	2.0
	2-Hexanone	ND	5.0
	Iodomethane	ND	2.0
	4-Methyl-2-pentanone	ND	5.0
	Methylene Chloride	ND	5.0
	Styrene	ND	2.0
	1,1,2,2-Tetrachloroethane	ND	2.0
	Tetrachloroethene	ND	2.0
	Toluene	ND	2.0
	1,1,1-Trichloroethane	ND	2.0
	1,1,2-Trichloroethane	ND	2.0
	Trichloroethene	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

** 711-2

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project:
Received: 08/07/1996

NCA Number: P608100
Matrix: water

Sample Name	Analyte	Result	MRL
96-76 OWW#STAGE	Acetone	230	25
	Acrolein	ND	200
	Acrylonitrile	ND	10
	Benzene	ND	2.0
	Bromodichloromethane	ND	2.0
	Bromoform	ND	2.0
	Bromomethane	ND	10
	2-Butanone	ND	25
	Carbon Disulfide	ND	2.0
	Carbon Tetrachloride	ND	2.0
	Chlorobenzene	ND	2.0
	Chloroethane	ND	10
	Chloroform	4.1	2.0
	Chloromethane	ND	10
	Dibromochloromethane	ND	2.0
	Dibromomethane	ND	2.0
	1,4-Dichloro-2-butene	ND	10
	1,2-Dichlorobenzene	ND	2.0
	1,3-Dichlorobenzene	ND	2.0
	1,4-Dichlorobenzene	ND	2.0
	Dichlorodifluoromethane	ND	5.0
	1,1-Dichloroethane	ND	2.0
	1,2-Dichloroethane	ND	2.0
	1,1-Dichloroethene	ND	2.0
	cis-1,2-Dichloroethene	ND	2.0
	trans1,2Dichloroethene	ND	2.0
	1,2-Dichloropropane	ND	2.0
	cis-1,3-Dichloropropene	ND	2.0
	trans1,3Dichloropropene	ND	2.0
	Ethyl Methacrylate	ND	2.0
	Ethylbenzene	ND	2.0
	2-Hexanone	ND	5.0
	Iodomethane	ND	2.0
	4-Methyl-2-pentanone	ND	5.0
	Methylene Chloride	ND	5.0
	Styrene	ND	2.0
	1,1,2,2-Tetrachloroethane	ND	2.0
	Tetrachloroethene	ND	2.0
	Toluene	ND	2.0
	1,1,1-Trichloroethane	ND	2.0
	1,1,2-Trichloroethane	ND	2.0
	Trichloroethene	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

** 711-1

SCOEPA00023110

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

Offices:
BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: CE-FAB-2

NCA Project #: P609309
Matrix: water
Received: 09/23/96
Sampled: 09/18/96
Prepared: 09/24/96
Analyzed: 09/24/96

Client ID	Lab ID	Analyte	Result	MRL
96-119	P609309-2	Acetone	32	25
Fab 2 CE grab		Acrolein	ND	200
18 Sep 96		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	2.7	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023111

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

Offices:
BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Volatile Organic Compounds per EPA 8240
Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: CE-FAB-2

NCA Project #: P609309
Matrix: water
Received: 09/23/96
Sampled: 09/18/96
Prepared: 09/24/96
Analyzed: 09/24/96

Client ID	Lab ID	Analyte	Result	MRL
96-120	P609309-3	Acetone	340	25
Fab 2 OWW grab 18 Sep96		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	2.8	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023112

CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client:	Wacker Siltronic Corporation	**NCA Project #:**	P609108
Project:	FAB-2 TTO	**Matrix:**	water
		Received:	09/10/96
		Sampled:	09/09/96
		Prepared:	09/16/96
		Analyzed:	09/16/96

Client ID	Lab ID	Analyte	Result	MRL
96-94 Fab 2 CE grab	P609108-1	Acetone	46	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	2.7	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	5.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023113

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

Offices:
BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: TTO'S & CHROME (T)

NCA Project #: P610221
Matrix: water
Received: 10/10/96
Sampled: 10/09/96
Prepared: 10/15/96
Analyzed: 10/15/96

Client ID	Lab ID	Analyte	Result	MRL
96-122 CE grab 9 oct 96	P610221-2	Acetone	43	25
		Acrolein	ND	200
		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	4.1	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	7.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023114

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

Offices:
BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Volatile Organic Compounds per EPA 8240

Results In ug/L (ppb)

Client: Wacker Siltronic Corporation
Project: TTO'S & CHROME (T)

NCA Project #: P610221
Matrix: water
Received: 10/10/96
Sampled: 10/09/96
Prepared: 10/15/96
Analyzed: 10/15/96

Client ID	Lab ID	Analyte	Result	MRL
96-121	P610221-1	Acetone	170	25
OWW grab		Acrolein	ND	200
9 oct96		Acrylonitrile	ND	10
		Benzene	ND	2.0
		Bromodichloromethane	ND	2.0
		Bromoform	ND	2.0
		Bromomethane	ND	10
		2-Butanone	ND	25
		Carbon Disulfide	ND	2.0
		Carbon Tetrachloride	ND	2.0
		Chlorobenzene	ND	2.0
		Chloroethane	ND	10
		Chloroform	2.4	2.0
		Chloromethane	ND	10
		Dibromochloromethane	ND	2.0
		Dibromomethane	ND	2.0
		1,4-Dichloro-2-butene	ND	10
		1,2-Dichlorobenzene	ND	2.0
		1,3-Dichlorobenzene	ND	2.0
		1,4-Dichlorobenzene	ND	2.0
		Dichlorodifluoromethane	ND	5.0
		1,1-Dichloroethane	ND	2.0
		1,2-Dichloroethane	ND	2.0
		1,1-Dichloroethene	ND	2.0
		cis-1,2-Dichloroethene	ND	2.0
		trans1,2Dichloroethene	ND	2.0
		1,2-Dichloropropane	ND	2.0
		cis-1,3-Dichloropropene	ND	2.0
		trans1,3Dichloropropene	ND	2.0
		Ethyl Methacrylate	ND	2.0
		Ethylbenzene	ND	2.0
		2-Hexanone	ND	5.0
		Iodomethane	ND	2.0
		4-Methyl-2-pentanone	ND	5.0
		Methylene Chloride	ND	7.0
		Styrene	ND	2.0
		1,1,2,2-Tetrachloroethane	ND	2.0
		Tetrachloroethene	ND	2.0
		Toluene	ND	2.0
		1,1,1-Trichloroethane	ND	2.0

MRL Method Reporting Level
ND None Detected at or above the method reporting level
* See Comment Section at end of report

SCOEPA00023115

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

Offices:
BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Wacker Siltronics Corporation	Project:	n/a	Sampled: 11/5/96
7200 N.W. Front	Project Number:	n/a	Received: 11/6/96
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 11/21/96 14:50

Volatile Organic Compounds per EPA Method 8240B
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
96-131 Feb 2 OWwgrab			P611073-03				Water	
Acetone	1160311	11/8/96	11/8/96		25.0	**391**	ug/l	
Acrolein	"	"	"		200	ND	"	
Acrylonitrile	"	"	"		10.0	ND	"	
Benzene	"	"	"		2.00	ND	"	
Bromodichloromethane	"	"	"		2.00	ND	"	
Bromoform	"	"	"		2.00	ND	"	
Bromomethane	"	"	"		10.0	ND	"	
2-Butanone	"	"	"		25.0	**32.9**	"	
Carbon disulfide	"	"	"		2.00	ND	"	
Carbon tetrachloride	"	"	"		2.00	ND	"	
Chlorobenzene	"	"	"		2.00	ND	"	
Chloroethane	"	"	"		10.0	ND	"	
Chloroform	"	"	"		2.00	**6.17**	"	
Chloromethane	"	"	"		10.0	ND	"	
Dibromochloromethane	"	"	"		2.00	ND	"	
Dibromomethane	"	"	"		2.00	ND	"	
1,4-Dichloro-2-butene	"	"	"		10.0	ND	"	
1,2-Dichlorobenzene	"	"	"		2.00	ND	"	
1,3-Dichlorobenzene	"	"	"		2.00	ND	"	
1,4-Dichlorobenzene	"	"	"		2.00	ND	"	
Dichlorodifluoromethane	"	"	"		5.00	ND	"	
1,1-Dichloroethane	"	"	"		2.00	ND	"	
1,2-Dichloroethane	"	"	"		2.00	ND	"	
1,1-Dichloroethene	"	"	"		2.00	ND	"	
cis-1,2-Dichloroethene	1160311	11/8/96	11/8/96		2.00	ND	ug/l	
trans-1,2-Dichloroethene	"	"	"		2.00	ND	"	
1,2-Dichloropropane	"	"	"		2.00	ND	"	
cis-1,3-Dichloropropene	"	"	"		2.00	ND	"	
trans-1,3-Dichloropropene	"	"	"		2.00	ND	"	
Ethyl Methacrylate	"	"	"		2.00	ND	"	
Ethylbenzene	"	"	"		2.00	ND	"	
2-Hexanone	"	"	"		5.00	ND	"	
Iodomethane	"	"	"		2.00	ND	"	
4-Methyl-2-pentanone	"	"	"		5.00	ND	"	
Methylene chloride	"	"	"		5.00	ND	"	
Styrene	"	"	"		2.00	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		2.00	ND	"	
Tetrachloroethene	"	"	"		2.00	ND	"	

North Creek Analytical, Inc.

Refer to end of report for text of notes and definitions.

Joy Chang, Project Manager

SCOEPA00023116

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

Offices:
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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Wacker Siltronics Corporation	Project:	n/a	Sampled: 11/5/96
7200 N.W. Front	Project Number:	n/a	Received: 11/6/96
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 11/21/96 14:50

Volatile Organic Compounds per EPA Method 8240B
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
96-130 Fab 2 CE grab			P611073-02				Water	
Acetone	1160311	11/8/96	11/8/96		25.0	**106**	ug/l	
Acrolein	"	"	"		200	ND	"	
Acrylonitrile	"	"	"		10.0	ND	"	
Benzene	"	"	"		2.00	ND	"	
Bromodichloromethane	"	"	"		2.00	ND	"	
Bromoform	"	"	"		2.00	ND	"	
Bromomethane	"	"	"		10.0	ND	"	
2-Butanone	"	"	"		25.0	ND	"	
Carbon disulfide	"	"	"		2.00	ND	"	
Carbon tetrachloride	"	"	"		2.00	ND	"	
Chlorobenzene	"	"	"		2.00	ND	"	
Chloroethane	"	"	"		10.0	ND	"	
Chloroform	"	"	"		2.00	**6.35**	"	
Chloromethane	"	"	"		10.0	ND	"	
Dibromochloromethane	"	"	"		2.00	ND	"	
Dibromomethane	"	"	"		2.00	ND	"	
1,4-Dichloro-2-butene	"	"	"		10.0	ND	"	
1,2-Dichlorobenzene	"	"	"		2.00	ND	"	
1,3-Dichlorobenzene	"	"	"		2.00	ND	"	
1,4-Dichlorobenzene	"	"	"		2.00	ND	"	
Dichlorodifluoromethane	"	"	"		5.00	ND	"	
1,1-Dichloroethane	"	"	"		2.00	ND	"	
1,2-Dichloroethane	"	"	"		2.00	ND	"	
1,1-Dichloroethene	"	"	"		2.00	ND	"	
cis-1,2-Dichloroethene	"	"	"		2.00	ND	"	
trans-1,2-Dichloroethene	"	"	"		2.00	ND	"	
1,2-Dichloropropane	"	"	"		2.00	ND	"	
cis-1,3-Dichloropropene	"	"	"		2.00	ND	"	
trans-1,3-Dichloropropene	"	"	"		2.00	ND	"	
Ethyl Methacrylate	"	"	"		2.00	ND	"	
Ethylbenzene	"	"	"		2.00	ND	"	
2-Hexanone	"	"	"		5.00	ND	"	
Iodomethane	"	"	"		2.00	ND	"	
4-Methyl-2-pentanone	"	"	"		5.00	ND	"	
Methylene chloride	"	"	"		5.00	ND	"	
Styrene	"	"	"		2.00	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		2.00	ND	"	
Tetrachloroethene	"	"	"		2.00	ND	"	

North Creek Analytical, Inc.

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Joy Chang, Project Manager

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NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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Wacker Siltronics Corporation	Project:	n/a	Sampled: 12/2/96
7200 N.W. Front	Project Number:	96-154	Received: 12/4/96
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 12/12/96 16:28

Volatile Organic Compounds per EPA Method 8240B
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
96-154 OWW TTC's			P612057-01				Water	
Acetone	1260231	12/11/96	12/11/96		25.0	**158**	ug/l	
Acrolein	"	"	"		200	ND	"	
Acrylonitrile	"	"	"		10.0	ND	"	
Benzene	"	"	"		2.00	ND	"	
Bromodichloromethane	"	"	"		2.00	ND	"	
Bromoform	"	"	"		2.00	ND	"	
Bromomethane	"	"	"		10.0	ND	"	
2-Butanone	"	"	"		25.0	ND	"	
Carbon disulfide	"	"	"		2.00	ND	"	
Carbon tetrachloride	"	"	"		2.00	ND	"	
Chlorobenzene	"	"	"		2.00	ND	"	
Chloroethane	"	"	"		10.0	ND	"	
Chloroform	"	"	"		2.00	**4.74**	"	
Chloromethane	"	"	"		10.0	ND	"	
Dibromochloromethane	"	"	"		2.00	ND	"	
Dibromomethane	"	"	"		2.00	ND	"	
1,4-Dichloro-2-butene	"	"	"		10.0	ND	"	
1,2-Dichlorobenzene	"	"	"		2.00	ND	"	
1,3-Dichlorobenzene	"	"	"		2.00	ND	"	
1,4-Dichlorobenzene	"	"	"		2.00	ND	"	
Dichlorodifluoromethane	"	"	"		5.00	ND	"	
1,1-Dichloroethane	"	"	"		2.00	ND	"	
1,2-Dichloroethane	"	"	"		2.00	ND	"	
1,1-Dichloroethene	"	"	"		2.00	ND	"	
cis-1,2-Dichloroethene	"	"	"		2.00	ND	"	
trans-1,2-Dichloroethene	"	"	"		2.00	ND	"	
1,2-Dichloropropane	"	"	"		2.00	ND	"	
cis-1,3-Dichloropropene	"	"	"		2.00	ND	"	
trans-1,3-Dichloropropene	"	"	"		2.00	ND	"	
Ethyl Methacrylate	"	"	"		2.00	ND	"	
Ethylbenzene	"	"	"		2.00	ND	"	
2-Hexanone	"	"	"		5.00	ND	"	
Iodomethane	"	"	"		2.00	ND	"	
4-Methyl-2-pentanone	"	"	"		5.00	ND	"	
Methylene chloride	"	"	"		5.00	ND	"	
Styrene	"	"	"		2.00	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		2.00	ND	"	
Tetrachloroethene	"	"	"		2.00	ND	"	

North Creek Analytical, Inc.

**Refer to end of report for text of notes and definitions.*

Joy Chang, Project Manager

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SCOEPA00023118

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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Wacker Siltronics Corporation	Project:	n/a	Sampled: 12/4/96
7200 N.W. Front	Project Number:	n/a	Received: 12/4/96
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 12/18/96 16:36

Volatile Organic Compounds per EPA Method 8240B
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
96-157 Fab 2 OWW Grab			P612058-03				Water	
Acetone	1260231	12/11/96	12/11/96		50.0	**385**	ug/l	
Acrolein	"	"	"		400	ND	"	
Acrylonitrile	"	"	"		20.0	ND	"	
Benzene	"	"	"		4.00	ND	"	
Bromodichloromethane	"	"	"		4.00	ND	"	
Bromoform	"	"	"		4.00	ND	"	
Bromomethane	"	"	"		20.0	ND	"	
2-Butanone	"	"	"		50.0	ND	"	
Carbon disulfide	"	"	"		4.00	ND	"	
Carbon tetrachloride	"	"	"		4.00	ND	"	
Chlorobenzene	"	"	"		4.00	ND	"	
Chloroethane	"	"	"		20.0	ND	"	
Chloroform	"	"	"		4.00	**4.76**	"	
Chloromethane	"	"	"		20.0	ND	"	
Dibromochloromethane	"	"	"		4.00	ND	"	
Dibromomethane	"	"	"		4.00	ND	"	
1,4-Dichloro-2-butene	"	"	"		20.0	ND	"	
1,2-Dichlorobenzene	"	"	"		4.00	ND	"	
1,3-Dichlorobenzene	"	"	"		4.00	ND	"	
1,4-Dichlorobenzene	"	"	"		4.00	ND	"	
Dichlorodifluoromethane	"	"	"		10.0	ND	"	
1,1-Dichloroethane	"	"	"		4.00	ND	"	
1,2-Dichloroethane	"	"	"		4.00	ND	"	
1,1-Dichloroethene	"	"	"		4.00	ND	"	
cis-1,2-Dichloroethene	1260231	12/11/96	12/11/96		4.00	ND	ug/l	
trans-1,2-Dichloroethene	"	"	"		4.00	ND	"	
1,2-Dichloropropane	"	"	"		4.00	ND	"	
cis-1,3-Dichloropropene	"	"	"		4.00	ND	"	
trans-1,3-Dichloropropene	"	"	"		4.00	ND	"	
Ethyl Methacrylate	"	"	"		4.00	ND	"	
Ethylbenzene	"	"	"		4.00	ND	"	
2-Hexanone	"	"	"		10.0	ND	"	
Iodomethane	"	"	"		4.00	ND	"	
4-Methyl-2-pentanone	"	"	"		10.0	ND	"	
Methylene chloride	"	"	"		10.0	ND	"	
Styrene	"	"	"		4.00	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		4.00	ND	"	
Tetrachloroethene	"	"	"		4.00	ND	"	

North Creek Analytical, Inc.

Refer to end of report for text of notes and definitions.

Joy Chang, Project Manager

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NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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PORTLAND ▪ (503) 643-9200 ▪ FAX 644-2202

Wacker Siltronics Corporation	Project:	n/a	Sampled: 12/4/96
7200 N.W. Front	Project Number:	n/a	Received: 12/4/96
Portland, OR 97210	Project Manager:	Thomas Rothschild	Reported: 12/18/96 16:36

Volatile Organic Compounds per EPA Method 8240B
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
96-156 Fab 2 CE Grab			P612058-02				Water	
Acetone	1260231	12/11/96	12/11/96		25.0	**96.3**	ug/l	
Acrolein	"	"	"		200	ND	"	
Acrylonitrile	"	"	"		10.0	ND	"	
Benzene	"	"	"		2.00	ND	"	
Bromodichloromethane	"	"	"		2.00	ND	"	
Bromoform	"	"	"		2.00	ND	"	
Bromomethane	"	"	"		10.0	ND	"	
2-Butanone	"	"	"		25.0	ND	"	
Carbon disulfide	"	"	"		2.00	ND	"	
Carbon tetrachloride	"	"	"		2.00	ND	"	
Chlorobenzene	"	"	"		2.00	ND	"	
Chloroethane	"	"	"		10.0	ND	"	
Chloroform	"	"	"		2.00	**6.23**	"	
Chloromethane	"	"	"		10.0	ND	"	
Dibromochloromethane	"	"	"		2.00	ND	"	
Dibromomethane	"	"	"		2.00	ND	"	
1,4-Dichloro-2-butene	"	"	"		10.0	ND	"	
1,2-Dichlorobenzene	"	"	"		2.00	ND	"	
1,3-Dichlorobenzene	"	"	"		2.00	ND	"	
1,4-Dichlorobenzene	"	"	"		2.00	ND	"	
Dichlorodifluoromethane	"	"	"		5.00	ND	"	
1,1-Dichloroethane	"	"	"		2.00	ND	"	
1,2-Dichloroethane	"	"	"		2.00	ND	"	
1,1-Dichloroethene	"	"	"		2.00	ND	"	
cis-1,2-Dichloroethene	"	"	"		2.00	ND	"	
trans-1,2-Dichloroethene	"	"	"		2.00	ND	"	
1,2-Dichloropropane	"	"	"		2.00	ND	"	
cis-1,3-Dichloropropene	"	"	"		2.00	ND	"	
trans-1,3-Dichloropropene	"	"	"		2.00	ND	"	
Ethyl Methacrylate	"	"	"		2.00	ND	"	
Ethylbenzene	"	"	"		2.00	ND	"	
2-Hexanone	"	"	"		5.00	ND	"	
Iodomethane	"	"	"		2.00	ND	"	
4-Methyl-2-pentanone	"	"	"		5.00	ND	"	
Methylene chloride	"	"	"		5.00	ND	"	
Styrene	"	"	"		2.00	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		2.00	ND	"	
Tetrachloroethene	"	"	"		2.00	ND	"	

North Creek Analytical, Inc.

**Refer to end of report for text of notes and definitions.*

Joy Chang, Project Manager

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SCOEPA00023120

Air Emissions Calculations for 1995

Emissions from burning deisel fuel in emergency generators, other internal combustion engines

AP-42 factors, page3.3-1, Vol I

	lb/hphr
Particulate	0.0143
CO	0.434
NOx	2.01
SOx	0.133

VOCs are not listed in the table for this type of pollutant source.

Values used in calculating emissions:

78	usage, in hr
400	kW rated power
536.4	hp, converted using 1.341 hp = 1 kW
0.25	load factor (power used/power rating)

The equation given by AP-42 is: hr*hp*load factor*emission factor
This yeilds the following emission estimates:

	lb/year	tons/year
Particulate	150	0.07
CO	4540	2.27
NOx	21024	10.51
SOx	1391	0.70

Notes: The load factor of .25 gives a conservative estimate. The operation records for the emergency generators shows that they were run mostly without load

SCOEPA00023121

Air Emissions Calculations for 1995

Emissions from burning natural gas

Natural gas usage:	
	10^6 cf
Jan	10.4
Feb	9.9
Mar	8.8
Apr	10.1
May	8.4
Jun	7.7
Jul	7.7
Aug	7.6
Sep	7.7
Oct	8.3
Nov	10.3
Dec	18.3
TOTAL:	115.2

Using AP-42 emission factors:			
Particulate	3	lbs/10^6 cf	(avg of 1 to 5 lb/10^6 cf
CO	35	lbs/10^6 cf	
NOx	140	lbs/10^6 cf	
SOx	0.6	lbs/10^6 cf	
VOC	5.8	lbs/10^6 cf	

Assuming all fuel fired equipment behave according to AP-42
we can calculate using the annual NG usage value:

	lbs/year
Particulate	345.6
CO	4032
NOx	16128
SOx	69.12
VOC	668.16

AP-42_CA.W95

CRITERIA POLLUTANT EMISSIONS 1995

Natural gas usage:	
	10^6 cf
Jan	10.4
Feb	9.9
Mar	8.8
Apr	10.1
May	8.4
Jun	7.7
Jul	7.7
Aug	7.6
Sep	7.7
Oct	8.3
Nov	10.3
Dec	18.3
TOTAL:	115.2

Using AP-42 emission factors:			
Particulate	2.5	lbs/10^6 cf	(avg of 1 to 5 lb/10^6 cf)
CO	35	lbs/10^6 cf	
NOx	140	lbs/10^6 cf	
SOx	0.6	lbs/10^6 cf	
VOC	5.8	lbs/10^6 cf	

Assuming all fuel fired equipment behave according to AP-42
we can calculate using the annual NG usage value:

	lbs/year
Particulate	288
CO	4032
NOx	16128
SOx	69
VOC	668

Calculating for the deisel feuls purchased in 1995:
Given: 6351 gal for the year of OFFROAD deisel #2
This deisel contains a maximum of 0.5 WT% sulfur

0.86	sp.gr.		
8.34	lbs/galH2O		
7.1724	lbs/gal Deisel	45551.912	lbs deisel
0.035862	lbs sulfur/lb deisel	1633.5827	lbs sulfur

Assuming all the sulfur goes to SOx

Assuming SOx is: 0.00% SO then 64.1 =MW SOx
100.00% SO2

then from the deisel fuel the SOx emissions were:

	32.1	MW sulfur, lbs/lbmol	
gives	50.890426	lbmol sulfur	
which is	50.890426	lbmol SOx	
and equals	3262.0763	lbs SOx	emitted by the deisel fuel

SCOEPA00023123

CRITERIA POLLUTANT EMISSIONS 1995

Emissions from burning deisel fuel in emergency generators, other internal combustion engines

AP-42 factors, page3.3-1, Vol I

AP-42 factors based on Grade 2 oil usage

	lb/hphr
Particulate	0.0143
CO	0.434
NOx	2.01
SOx	0.133

VOCs are not listed in the table for this type of pollutant source.

78 usage, in hr
400 kW rated power
536.4 hp, converted using 1.341 hp = 1 kW
0.25 load factor (power used/power rating)

The equation given by AP-42 is: hr*hp*load factor*emission factor
This yeilds the following table:

	lb/year	tons/year
Particulate	149.57514	0.0747876
CO	4539.5532	2.2697766
NOx	21024.198	10.512099
SOx	1391.1534	0.6955767

decimals

Notes: The load factor of .25 gives a conservative estimate. The operation records for the emergency generators shows that they were run mostly without load

SCOEPA00023124

Air Emissions Calculations for 1995

Natural gas usage:	
	10^6 cf
Jan	10.4
Feb	9.9
Mar	8.8
Apr	10.1
May	8.4
Jun	7.7
Jul	7.7
Aug	7.6
Sep	7.7
Oct	8.3
Nov	10.3
Dec	18.3
TOTAL:	115.2

Using AP-42 emission factors:			
Particulate	2.5	lbs/10^6 cf	(avg of 1 to 5 lb/10^6 cf)
CO	35	lbs/10^6 cf	
NOx	140	lbs/10^6 cf	
SOx	0.6	lbs/10^6 cf	
VOC	5.8	lbs/10^6 cf	

Assuming all fuel fired equipment behave according to AP-42
we can calculate using the annual NG usage value:

	lbs/year
Particulate	288
CO	4032
NOx	16128
SOx	69
VOC	668

Calculating for the deisel feuls:
Given: 6351 gal for the year of OFFROAD deisel #2
This deisel contains a maximum of 0.5 WT% sulfur

0.86	sp.gr.		
8.34	lbs/galH2O		
7.1724	lbs/gal Deisel	45551.912	lbs deisel
0.035862	lbs sulfur/lb deisel	1633.5827	lbs sulfur

Assuming all the sulfur goes to SOx

Assuming SOx is: 25.00% SO then 60.1 =MW SOx
75.00% SO2

then from the deisel fuel the SOx emissions were:

	32.1	MW sulfur, lbs/lbmol
gives	50.89043	lbmol sulfur
which is	50.89043	lbmol SOx
and equals	3058.515	lbs SOx emitted by the deisel fuel

SCOEPA00023125

Material	Part no	Container size	Form	Density	Lb/gal	Gal/ea	Lbs/each	95units	95lbs	Voc	Lbs voc	Evap	Voc evap lbs.
Spraypaint	4106022		L				1.4	125	175	85	148.75	100	148.75
Varnish	4106023.	16oz Sp C	L	0.8	6.66	0.156	1.0404576	0	0	80	0	100	0
Silicone Rubber Sealant	4216002.	10.3oz Tub	L	1.04	8.67	0.08	0.6936384	40	27.745536	61	16.924777	8	1.3539822
RTV Gasket Maker	4216007.	8 oz Sp Ca	L	1.04	8.67	0.0625	0.541905	40	21.6762	8	1.734096	100	1.734096
RTV Silicone Hi Temp	4216008	8 oz	L	1.3	10.8	0.05	0.54	95	51.3	8	4.104	100	4.104
Cleaner (butyl)	4404001.	1 Gal Pl B	L		8.6	1	8.6	2	17.2	3	0.516	100	0.516
Cleaner	4404002.	15oz Sp C	L	1.57	13	0.117	1.53142353	72	110.26249416	96	105.85199	100	105.85199
Dust off	4404004.	15oz Sp Ca	L	1.19	9.95	0.117	1.16466222	75	87.3496665	100	87.349667	100	87.349667
Paint Stripper	4404008	16oz Sp C	L		7.5	0.125	0.9375	3	2.8125	31	0.871875	100	0.871875
Racon 22	4409006.	30# Dm/li	G	1.2	10	3	30	32	960	0	0	100	0
Stripper	4419005.	1 Gal (4 G	L	1.04	8.67	1	8.67048	100	867.048	100	867.048	100	867.048
Acid Acetic	4419009.	2.5 ltr B	L	1.04	8.74	0.6605	5.77641133	81	467.88931773	100	467.88932	1	4.6788932
Alcohol (Ethanol) Vanzol	4436101.	55 Gal Dm	L	0.8	6.66	55	363	18	6534	100	6534	100	6534
Acetone	4439001.	55 Gal Dm	L	0.79	6.59	55	358	10	3580	100	3580	90	32
Alcohol (Isopropyl)	4439201.	55 Gal Dm	L	0.79	6.58	55	362	94	34028	100	34028	83	28243.24
Lubricat spray	4459300.	11oz Sp Ca	L	1	8.33	0.086	0.716982	3	2.150946	37	0.79585	90	0.716265
Lubricant	4459712.	16oz Sp Ca	L	0.81	6.8	0.125	0.85110348	211	179.58283428	70	125.70798	70	87.995589
Teflon Lube	4459718.	16oz Sp Ca	L	0.6	5	0.125	0.625275	8	5.0022	85	4.25187	100	4.25187
Neoprene	4467300.	16oz Btl	L	0.81	6.8	0.125	0.850374	10	8.50374	88	7.4832912	83	6.2111317
Defluxer	4489007.	16oz Sp Ca	L	1.47	12.2	0.125	1.53192375	15	22.97885625	5	1.1489428	100	1.1489428
Caviclean #2	5405005.	55 Gal Dm	L	1.05	8.75	55	481.46175	13	6259.00275	12	751.08033	74	555.79944
Plasti-Dip	5455100	16 oz can	L	0.93	7.75	0.129	1	6	6	85	5.1	100	5.1
Aerosol Lubricant	5455108.	20oz Sp Ca	L	0.8	6.66	0.156	1.0404576	3	3.1213728	85	2.6531669	100	2.6531669
Valtron	5465002	1 gal can	s			1	1	68	68	40	27.2	100	27.2
Adhesive Catalyst	5465003.	16oz Can	L	1.1	9.17	0.125	1.1463375	53	60.7558875	40	24.302355	50	12.151178
Epoxy fast cure grey	5465005	10 oz can				0.625	0.625	820	512.5	85	435.625	100	435.625
Wiz #F-57	5466016.	1 Gal Can	L	0.95	7.92	1	7.92015	4	31.6806	94	29.779764	94	27.992978
Adhesive	5467303.	20oz Sp Ca	L	0.7	5.83	0.156	0.9104004	6	5.4624024	88	4.8069141	100	4.8069141
											TOTAL VOC evaporated		40393.151

update using 95master.db

VOC 95_ES.WB1

Material	Part no	Container size	Form	Density	Lb/gal	Gal/ea	Lbs/each	95units	95lbs	Voc	Lbs voc	Evap	Voc evap lbs.
Spraypaint (includes20-30	4106020		L				1.4	125	175	85	148.75	100	148.75
Varnish	4106023.	16oz Sp C	L	0.8	6.66	0.156	1.040458	0	0	80	0	100	0
Silicone Rubber Sealant	4216002.	10.3oz Tub	L	1.04	8.67	0.08	0.693638	40	27.745536	61	16.924777	8	1.3539822
Silicone Rubber Sealant	4216003	10.3oz Car	S	1.07	8.92		0.64	14	8.96	61	5.4656	5	0.27328
RTV Gasket Maker	4216007.	8 oz Sp Ca	L	1.04	8.67	0.063	0.541905	40	21.6762	8	1.734096	100	1.734096
RTV Silicone Hi Temp	4216008	8 oz	L	1.3	10.8	0.05	0.54	95	51.3	8	4.104	100	4.104
Cleaner (butyl)	4404001.	1 Gal Pl B	L		8.6	1	8.6	2	17.2	3	0.516	100	0.516
Cleaner	4404002.	15oz Sp C	L	1.57	13	0.117	1.531424	72	110.262494	96	105.85199	100	105.85199
Dust off	4404004.	15oz Sp Ca	L	1.19	9.95	0.117	1.164662	75	87.3496665	100	87.349667	100	87.349667
Cleaner	4404006	16oz Sp C	L	1.5	12.5	1.3	1.56	19	29.64	85	25.194	100	25.194
Paint Stripper	4404008.	16oz Sp C	L		7.5	0.125	0.9375	3	2.8125	31	0.871875	100	0.871875
Racon 22	4409006.	30# Dm/li	G	1.2	10	3	30	32	960	0	0	100	0
Stripper	4419005.	1 Gal (4 G	L	1.04	8.67	1	8.67048	100	867.048	100	867.048	100	867.048
Acid Acetic	4419009.	2.5 ltr B	L	1.04	8.74	0.661	5.776411	81	467.889318	100	467.88932	1	4.6788932
Alcohol (Ethanol) Vanzol	4436101.	55 Gal Dm	L	0.8	6.66	55	363	18	6534	100	6534	100	6534
Acetone	4439001.	55 Gal Dm	L	0.79	6.59	55	358	10	3580	100	3580	90	3222
Alcohol (Isopropyl)	4439201.	55 Gal Dm	L	0.79	6.58	55	362	94	34028	100	34028	83	28243.24
Lubricat spray	4459300.	11oz Sp Ca	L	1	8.33	0.086	0.716982	3	2.150946	37	0.79585	90	0.716265
Lubricant	4459712.	16oz Sp Ca	L	0.81	6.8	0.125	0.851103	211	179.582834	70	125.70798	70	87.995589
Lubricant	4459715	1gal pl b	L	0.81	5	0.16	0.78	5	3.9	0.82	0.03198	70	0.022386
Lubricant	4459717	20oz Sp Can	L	0.6	5	0.13	0.63	8	5.04	0.85	0.04284	100	0.04284
Teflon Lube	4459718.	16oz Sp Ca	L	0.6	5	0.125	0.625275	8	5.0022	85	4.25187	100	4.25187
Neoprene	4467300.	16oz Btl	L	0.81	6.8	0.125	0.850374	10	8.50374	88	7.4832912	83	6.2111317
Adhesive	4467305	5 Gal Pail	L	0.9	7.1	5	35.5	0	0	64.9	0	100	0
Defluxer	4489007.	16oz Sp Ca	L	1.47	12.2	0.125	1.531924	15	22.9788563	5	1.1489428	100	1.1489428
Caviclean #2	5405005.	55 Gal Dm	L	1.05	8.75	55	481.4618	13	6259.00275	12	751.08033	74	555.79944
Plasti-Dip	5455100	16 oz can	L	0.93	7.75	0.129	1	6	6	85	5.1	100	5.1
Aerosol Lubricant	5455108.	20oz Sp Ca	L	0.8	6.66	0.156	1.040458	3	3.1213728	85	2.6531669	100	2.6531669
Grease	5455109.	20oz Sp Ca	L	0.9	7.5	0.16	1.17	7	8.19	0.85	0.069615	6	0.0041769
Valtron	5465002	1 gal can	s			1	1	68	68	40	27.2	100	27.2
Adhesive Catalyst	5465003.	16oz Can	L	1.1	9.17	0.125	1.146338	53	60.7558875	40	24.302355	50	12.151178
Epoxy fast cure grey	5465005	10 oz can				0.625	0.625	820	512.5	85	435.625	100	435.625
Wiz #F-57	5466016.	1 Gal Can	L	0.95	7.92	1	7.92015	4	31.6806	94	29.779764	94	27.992978
Cleaner	5466017	2 Gal Can	L	1.06	8.83	1	8.84	1	8.84	64	5.6576	100	5.6576
Adhesive	5467303.	20oz Sp Ca	L	0.7	5.83	0.156	0.9104	6	5.4624024	88	4.8069141	100	4.8069141
											TOTAL VOC evaporated		40424.345

95VOC_ES.WB1

Part no	Material	Container size	Form	Density	Lb/gal	Gal/ea	Lbs/each	95units	95LBS	Voc	Lbs voc	Evap	Voc evap
4106022	Spraypaint						1.40	125.00	204.00	85.00	174.00	100.0	174.00
4106023	Varnish	16oz Sp C	L	0.80	6.66	0.16	1.04	0.00	1.04	80.00	0.83	100.0	0.83
4216002	Silicone Rubber Sealant	10.3oz Tub	L	1.04	8.67	0.08	0.69	40.00	19.32	61.00	11.79	8.00	0.94
4216003	Silicone Rubber Sealant	10.3oz Car	S	1.07	8.92		0.64	14.00	5.12	61.00	3.12	5.00	0.16
4216007	RTV Gasket Maker	8 oz Sp Ca	L	1.04	8.67	0.06	0.54	40.00	14.58	8.00	1.17	100.0	1.17
4216008	RTV Silicone Hi Temp	8 oz	L	1.30	10.80	0.05	0.54	95.00	59.94	8.00	4.80	100.0	4.80
4404001	Cleaner (butyl)	1 Gal Pl B	L		8.60	1.00	8.60	2.00	8.60	3.00	0.26	100.0	0.26
4404002	Cleaner	15oz Sp C	L	1.57	13.00	0.12	1.53	72.00	110.16	96.00	105.75	100.0	105.75
4404004	Dust off	15oz Sp Ca	L	1.19	9.95	0.12	1.16	75.00	112.50	100.0	112.50	100.0	112.50
4404006	Cleaner	16oz Sp C	L	1.50	12.50	0.13	1.56	19.00	17.16	85.00	14.59	100.0	14.59
4404008	Paint Stripper	16oz Sp C	L		7.50	0.13	0.94	3.00	7.52	31.00	2.33	100.0	2.33
4409006	Racon 22	30# Dm/li	G	1.20	10.00	3.00	30.00	32.00	1,560.00	0.00	0.00	100.0	0.00
4419005	Stripper	1 Gal (4 G	L	1.04	8.67	1.00	8.67	100.00	242.76	100.0	242.76	100.0	242.76
4419009	Acid Acetic	2.5 ltr B	L	1.04	8.74	0.66	5.78	81.00	583.78	100.0	583.78	1.00	5.84
4436101	~~Alcohol~~ (Ethanol) Van 20	55 Gal Dm	L	0.80	6.66	55.00	363.00	18.00	6,534.00	100.0	6,040.00	100.0	6,040.00
4439001	Acetone	55 Gal Dm	L	0.79	6.59	55.00	358.00	10.00	3,938.00	100.0	3,576.00	90.00	3,218.00
4439201	Alcohol (Isopropyl)	55 Gal Dm	L	0.79	6.58	55.00	362.00	94.00	31,494.00	100.0	29,056.00	83.00	24,120.00
4459300	Lubricat spray	11oz Sp Ca	L	1.00	8.33	0.09	0.72	3.00	5.76	37.00	2.13	90.00	1.92
4459712	Lubricant	16oz Sp Ca	L	0.81	6.80	0.13	0.85	211.00	215.90	70.00	151.13	70.00	105.79
4459715	Lubricant	1 Gal Pl B	L	0.81	6.80	1.00	6.81	7.00	177.06	70.00	123.94	70.00	86.76
4459717	Lubricant	20oz Sp Ca	L	0.60	5.00	0.16	0.78	5.00	6.24	82.00	5.12	100.0	5.12
4459718	Teflon Lube	16oz Sp Ca	L	0.60	5.00	0.13	0.63	8.00	3.78	85.00	3.21	100.0	3.21
4467300	Neoprene	16oz Btl	L	0.81	6.80	0.13	0.85	10.00	0.85	88.00	0.75	83.00	0.62
4467305	Adhesive	5 Gal Pail	L	0.90	7.10	5.00	35.50	0.00	71.00	64.90	46.08	100.0	46.08
4489007	Defluxer	16oz Sp Ca	L	1.47	12.20	0.13	1.53	15.00	26.01	5.00	1.30	100.0	1.30
5405005	Caviclean #2	55 GAL D	L	1.05	8.75	55.00	481.46	13.00	4,814.60	12.00	577.75	74.00	427.54
5455100	Plasti-Dip	16 oz can	L	0.93	7.75	0.13	1.00	6.00	6.00	85.00	5.10	100.0	5.10
5455108	Aerosol Lubricant	20oz Sp Ca	L	0.80	6.66	0.16	1.04	3.00	4.16	85.00	3.54	100.0	3.54
5455109	Grease	20oz Sp Ca	L	0.90	7.50	0.16	1.17	7.00	7.02	85.00	5.97	6.00	0.36
5465002	Valtron	1 gal can	s			1.00	1.00	68.00	52.00	40.00	20.80	100.0	20.80
5465003	Adhesive Catalyst	16oz Can	L	1.10	9.17	0.13	1.15	53.00	65.50	40.00	26.20	50.00	13.10
5465005	Epoxy fast cure grey	10 oz can				0.63	0.63	820.00	53.12	85.00	45.15	100.0	45.15
5466016	Wiz #F-57	1 Gal Can	L	0.95	7.92	1.00	7.92	4.00	63.36	94.00	59.56	94.00	55.98
5466017	Cleaner	1 Gal Can	L	1.06	8.83	1.00	8.84	1.00	26.52	64.00	16.97	100.0	16.97
5467303	Adhesive	20oz Sp Ca	L	0.70	5.83	0.16	0.91	6.00	10.92	88.00	9.61	100.0	9.61

34,892.88 lbs.

NUM	Part no	Material	Cf ea	Container size	Form	Density	Lb/gal	Gal/ea
4385	4106022	Spraypaint						
5030	4106023.	Varnish		16oz Sp C	L	0.80	6.66	0.16
5710	4216002.	Silicone Rubber Sealant		10.3oz Tub	L	1.04	8.67	0.08
5718	4216003.	Silicone Rubber Sealant		10.3oz Car	S	1.07	8.92	
5130	4216007.	RTV Gasket Maker		8 oz Sp Ca	L	1.04	8.67	0.06
5150	4216008	RTV Silicone Hi Temp		8 oz	L	1.30	10.80	0.05
1710*	4404001.	Cleaner (butyl)		1 Gal Pl B	L		8.60	1.00
1970	4404002.	Cleaner		15oz Sp C	L	1.57	13.00	0.12
2350	4404004.	Dust off		15oz Sp Ca	L	1.19	9.95	0.12
2450	4404006.	Cleaner		16oz Sp C	L	1.50	12.50	0.13
2630	4404008.	Paint Stripper		16oz Sp C	L		7.50	0.13
5018	4409006.	Racon 22	130.68	30# Dm/li	G	1.20	10.00	3.00
4670	4419005.	Stripper		1 Gal (4 G	L	1.04	8.67	1.00
1010	4419009.	Acid Acetic		2.5 ltr B	L	1.04	8.74	0.66
2470	4436101.	Alcohol (Ethanol)		55 Gal Dm	L	0.80	6.66	55.00
1030	4439001.	Acetone		55 Gal Dm	L	0.79	6.59	55.00
3262	4439201.	Alcohol (Isopropyl)		55 Gal Dm	L	0.79	6.58	55.00
3850	4459300.	Lubricat spray		11oz Sp Ca	L	1.00	8.33	0.09
1730	4459712.	Lubricant		16oz Sp Ca	L	0.81	6.80	0.13
1734	4459715.	Lubricant		1 Gal Pl B	L	0.81	6.80	1.00
6190	4459717.	Lubricant		20oz Sp Ca	L	0.60	5.00	0.16
2330	4459718.	Teflon Lube		16oz Sp Ca	L	0.60	5.00	0.13
3890	4467300.	Neoprene		16oz Btl	L	0.81	6.80	0.13
6270	4467305.	Adhesive		5 Gal Pail	L	0.90	7.10	5.00
2602	4489007.	Defluxer		16oz Sp Ca	L	1.47	12.20	0.13
6310	5405005.	Caviclean #2		55 GAL D	L	1.05	8.75	55.00
4650	5455100	Plasti-Dip		16 oz can	L	0.93	7.75	0.13
5670	5455108.	Aerosol Lubricant		20oz Sp Ca	L	0.80	6.66	0.16
2830	5455109.	Grease		20oz Sp Ca	L	0.90	7.50	0.16
6420	5465002	Valtron		1 gal can	s			1.00
6410	5465003.	Adhesive Catalyst		16oz Can	L	1.10	9.17	0.13
8888	5465005	Epoxy fast cure grey		10 oz can				0.63
6690	5466016.	Wiz #F-57		1 Gal Can	L	0.95	7.92	1.00
6710	5466017.	Cleaner		1 Gal Can	L	1.06	8.83	1.00
1190	5467303.	Adhesive		20oz Sp Ca	L	0.70	5.83	0.16

Lbs/each	95units	95LBS	95inven	Voc	Lbs voc	Evap	Voc evap	Adjus1	Note
1.40	125.00	204.00	3	85.00	174.00	100.00	174.00		
1.04	0.00	1.04	1	80.00	0.83	100.00	0.83	1.00	|
0.69	40.00	19.32	7	61.00	11.79	8.00	0.94	1.00	|
0.64	14.00	5.12	4	61.00	3.12	5.00	0.16	1.00	|
0.54	40.00	14.58	4	8.00	1.17	100.00	1.17	1.00	|
0.54	95.00	59.94	28	8.00	4.80	100.00	4.80		
8.60	2.00	8.60	9	3.00	0.26	100.00	0.26	1.00	|
1.53	72.00	110.16	17	96.00	105.75	100.00	105.75	1.00	|
1.16	75.00	112.50	7	100.00	112.50	100.00	112.50	1.00	|
1.56	19.00	17.16	1	85.00	14.59	100.00	14.59	1.00	|
0.94	3.00	7.52	7	31.00	2.33	100.00	2.33	1.00	|
30.00	32.00	1,560.00	13	0.00	0.00	100.00	0.00	1.00	Exempt from DEQ reprotin
8.67	100.00	242.76	9	100.00	242.76	100.00	242.76	1.00	|
5.78	81.00	583.78	25	100.00	583.78	1.00	5.84	1.00	|
363.00	18.00	6,534.00	1	100.00	6,040.00	100.00	6,040.00	1.00	HW - 494 Lbs
358.00	10.00	3,938.00	1	100.00	3,576.00	90.00	3,218.00	1.00	HW - 362 Lbs, OWW 360
362.00	94.00	31,494.00	5	100.00	29,056.00	83.00	24,120.00	1.00	HW- 2438 Lbs, OWW - 49
0.72	3.00	5.76	8	37.00	2.13	90.00	1.92	1.00	|
0.85	211.00	215.90	75	70.00	151.13	70.00	105.79	1.00	|
6.81	7.00	177.06	12	70.00	123.94	70.00	86.76	1.00	|
0.78	5.00	6.24	8	82.00	5.12	100.00	5.12	1.00	|
0.63	8.00	3.78	6	85.00	3.21	100.00	3.21	1.00	|
0.85	10.00	0.85	1	88.00	0.75	83.00	0.62	1.00	|
35.50	0.00	71.00	0	64.90	46.08	100.00	46.08	1.00	|
1.53	15.00	26.01	11	5.00	1.30	100.00	1.30	1.00	|
481.46	13.00	4,814.60	1	12.00	577.75	74.00	427.54	1.00	|
1.00	6.00	6.00	6	85.00	5.10	100.00	5.10		
1.04	3.00	4.16	7	85.00	3.54	100.00	3.54	1.00	|
1.17	7.00	7.02	3	85.00	5.97	6.00	0.36	1.00	|
1.00	68.00	52.00	20	40.00	20.80	100.00	20.80		
1.15	53.00	65.50	5	40.00	26.20	50.00	13.10	1.00	|
0.63	820.00	53.12	2	85.00	45.15	100.00	45.15		
7.92	4.00	63.36	3	94.00	59.56	94.00	55.98	1.00	|
8.84	1.00	26.52	1	64.00	16.97	100.00	16.97	1.00	|
0.91	6.00	10.92	6	88.00	9.61	100.00	9.61	1.00	|

ote	Adj voc ev
	20.00
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	1.00
	0.00
	1.00
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	0.00
	106.00
	113.00
	15.00
	2.00
roting	0.00
	243.00
	6.00
	6,040.00
60	3,544.00
- 4940 Lbs	24,120.00
	2.00
	106.00
	87.00
	5.00
	3.00
	1.00
	46.00
	1.00
	430.00
	5.00
	4.00
	0.00
	21.00
	13.00
	45.00
	56.00
	17.00
	10.00

NUM	Part no	Material	Cf ea	Container size	Form	Density	Lb/gal	Gal/ea	Lbs/each	95units	95lbs	94units	94LBS	94Inven	93units	93LBS	93Inven	Voc	Lbs voc	Evap	Voc evap	Adjus1	Note	Adj voc ev
		Acetylene	10.00	10cf Cyl	G					5.00														
		Acetylene	40.00	40cf Cyl	G					4.00														
		Acetylene	75.00	75cf Cyl	G					1.00														
1940L		Acid Citric		50 lb bag	S				50.00	320.00			30,000.00		80.00	4,000.00		0.00						
6090		Acid Sulfuric		1500 Gal T	L	1.82	15.20	1.00	1.00	212,300.00			232,065.00		250,850.00	250,850.00	24	0.00				1.00		
6090		Acid Sulfuric MP		750 lb dru	L				750.00	2.00					5.00	3,750.00		0.00						
		Alkatrol 2025		180 Gal To	L	0.97	8.15	180.00	1,467.00	1.00														
1250		Aluminum Sulfate Solution 48%		55 Gal Dm	L	1.34	11.10	55.00	575.00	102.00			121,900.00		208.00	119,600.00	275	0.00		50.00		1.00		
2210		Aquafloc		180 Gal To	L	1.00	8.34	180.00	1,500.00	1.00														
		Argon	40.00	40cf Cyl	G					2.00														
1485L		Battery								0.00					0.00			0.00						
		Blend Sodium Sulfide 10%		1 lb	L				48,280.00	1.00			188,950.00					0.00						
3530		Calcium Hydroxide (Lime)		50 lb Bag	S	2.24	18.60		50.00	5,315.00			332,300.00		5,276.00	263,800.00	10000	0.00		0.00		1.00		
		Calcium Hydroxide Lime (4-G)			S				366,000.00	1.00														
		Calcium carbonate 300		50 lb bag	S					0.00			50.00					0.00						
		Carbon Dioxide		50 lb Cyl	G					2.00														
2122		Dearborn 154		180 Gal To	L	1.17	9.76	180.00	1,763.30	3.00														
2127		Dearborn 545		180 Gal To	L	1.07	8.93	180.00	1,599.00	3.00														
2190L		Dearborn 874		180 Gal To	L	1.10	9.18	180.00	1,654.80	3.00														
2125		Dearcide 735		36 lb Cart	S	1.60			36.00	2.00														
		Diborane/Hydrogen mixes	121.00	121cf Cyl	G					62.00														
		Dipropylene Glycol		470 lb Dm	L	1.02	8.51	55.00	470.00	18.00														
		Dowfrost		55 Gal Dm	L	1.04	8.75	55.00	480.00	4.00														
		Dowtherm SR-1		55 gal dr	L					0.00			1,037.00					0.00						
2572		Ferrosol 332		180 Gal To	L	1.12	9.35	180.00	1,683.00	1.00														
2574		Ferrosol 335		180 Gal To	L	1.13	9.43	180.00	1,694.00	1.00														
		Gasoline						55.00		1.00														
		Hydrofluoric Acid		40 lb Case	L	1.25	10.40	4.00	40.00	5.00														
		Kerosene				0.90		32.60		1.00														
		Magnesium Oxide		50 lb bag	S				50.00	0.00		50.00						0.00						
		Oxygen	20.00	20cf Cyl	G					2.00														
		Oxygen	80.00	80cf Cyl	G					1.00														
		Phosphine/Hydrogen mixes	120.00	120cf Cyl	G					104.00														
2145		Poly Elph 956		180 Gal To	L	1.04	8.67	180.00	1,558.50	8.00														
		Propane (Bulk)		240 Gal Tk	G			402.80		1.00														
		Propylene Glycol		480 lb Dm	L	1.03	8.62	55.00	480.00	2.00														
		Rodel LS10		450 lb Dm	L	1.08	9.00	50.00	450.00	290.00														
5860		Sodium Hypochlorite 12.5%		1 Gal (6-c	L	1.22	10.20	6.00	61.20	29.00			2,640.00		70.00	2,800.00		0.00						
		Sodium Hypochlorite 25%		4-1 gal ca	L	1.22	10.20	4.00	40.80	47.00			35,070.00					0.00						
5910		Solvent		55 Gal Dm	L	0.78	6.50	55.00	357.66	0.00					1.00	358.00	30	100.00		100.00		1.00	Controlled unit material shipped as HW	
		Stepanol AM		450 lb Dm	S	0.98	8.18	55.00	450.00	5.00														
		Triethylene Glycol		520 lb Dm	L	1.12	9.39	55.00	520.00	3.00														

NUM	Part no	Material	Cf ea	Container size	Form	Density	Lb/gal	Gal/ea	Lbs/each	95units	95lbs	94units	94LBS	94inven	93units	93LBS	93inven	Voc	Lbs voc	Evap	Voc evap	Adjus1	Note	Adj voc ev
1490	-	Battery		319 lb; 22	L	1.28	10.60	6.58	70.20	0.00					0.00		197.4	0.00				1.00		
1494	-	Battery		304 lb; 22	L	1.28	10.60	6.27	66.90	0.00					0.00		376.2	0.00				1.00		
1498	-	Battery		319 lb; 63	S	11.30	94.50		200.97	0.00					0.00		6029.1	0.00				1.00		
1502	-	Battery		304 lb; 63	S	11.30	94.50		191.50	0.00					0.00		11490	0.00				1.00		
1506	-	Battery		55.3 KG; 3	L	1.34	11.10	3.27	36.57	0.00					0.00		55.59	0.00				1.00		
1510	-	Battery		27.7 KG; 3	L	1.34	11.10	1.64	39.36	0.00					0.00		39.36	0.00				1.00		
1514*	-	Battery		62 lb; 24%	L	1.28	10.60	1.39	14.90	0.00					0.00		89.4	0.00				1.00		
1518	-	Battery		55.3 KG; 6	S	11.30	94.50		73.15	0.00					0.00		1243.5	0.00				1.00		
1522	-	Battery		27.7 KG; 6	S	11.30	94.50		36.64	0.00					0.00		878.36	0.00				1.00		
1526*	-	Battery		62 lb; 68%	S	11.30	94.50		42.16	0.00					0.00		252.96	0.00				1.00		
1570	-	Betz 35A		55 Gal Dm	L	1.73	14.40	55.00	793.27	0.00					0.00		55	0.00				1.00		
1830	-	Caustic Soda 25%		3000 Gal T	L	1.52	12.60	1.00	1.00	711,580.00			190,446.00		111,906.00	111,906.00	2500	0.00				1.00		
1810L	-	Caustic Soda Pellets		50 lb Sack	S	2.13	17.70		50.00	290.00			15,000.00		570.00	28,500.00	2500	0.00				1.00		
5810	-	Soda Ash		100 lb Bag	S	2.53	21.10		50.00	0.00			750.00		10.00	500.00	0	0.00				1.00		
5890	-	Sodium Sulfide		50 Lb Bag	S	1.85	15.40		50.00	0.00		0.00	0.00		50.00	2,500.00	1000	0.00				1.00		
1370	4000100.	Antimony, 99.9%		5 KG Pl Bt	S	6.68	55.60		11.02	146.00		112.00	1,234.24	71	155.00	1,708.57	35	0.00		0.00			1.00		
4518	4106020	Spraypaint							1.40	18.00		28.00	39.00	6				85.00		100.00				
4440	4106021	Spraypaint		16 oz Sp C					1.40	21.00		22.00	41.00	4				85.00		100.00				
4385	4106022	Spraypaint			L				1.40	7.00		17.00	24.00	3				85.00		100.00				
5030	4106023.	Varnish		16oz Sp C	L	0.80	6.66	0.16	1.04	0.00		1.00	1.04	1	0.00	0.00	2	80.00		100.00		1.00		
4470	4106024	Spraypaint			L	0.80	6.66	0.16	1.40	6.00		15.00	21.00	10				85.00		100.00				
4460	4106025	Spraypaint			L	0.80	6.66	0.16	1.40	6.00		5.00	7.00	2				85.00		100.00				
4465	4106026	Spraypaint			L	0.80	6.66	0.16	1.40	11.00		2.00	3.00	22				85.00		100.00				
4496	4106027	Spraypaint			L	0.80	6.66	0.16	1.40	13.00		10.00	14.00	4				85.00		100.00				
4455	4106028	Spraypaint			L	0.80	6.66	0.16	1.40	12.00		9.00	13.00	6				85.00		100.00				
4498	4106029	Spraypaint			L	0.80	6.66	0.16	1.40	4.00		2.00	3.00	2				85.00		100.00				
4430	4106030	Spraypaint			L	0.80	6.66	0.16	1.40	24.00		21.00	39.00	7				85.00		100.00				
5710	4216002.	Silicone Rubber Sealant		10.3oz Tub	L	1.04	8.67	0.08	0.69	40.00		28.00	19.32	7	19.00	13.18	6	61.00		8.00		1.00		
5718	4216003.	Silicone Rubber Sealant		10.3oz Car	S	1.07	8.92		0.64	14.00		8.00	5.12	4	16.00	10.30	2.575	61.00		5.00		1.00		
6510*	4216005.	Warmelelt Paste		150 Gram T	S		0.00		0.33	12.00		20.00	6.60	20	7.00	2.32	40	0.00				1.00		
5130	4216007.	RTV Gasket Maker		8 oz Sp Ca	L	1.04	8.67	0.06	0.54	40.00		27.00	14.58	4	24.00	11.34	7	8.00		100.00		1.00		
5150	4216008	RTV Silicone HI Temp		8 oz	L	1.30	10.80	0.05	0.54	95.00		111.00	59.94	28				8.00		100.00				
1170	4305503.	Ajax		21oz Fiber	S		0.00		1.31	149.00		159.00	208.29	53	171.00	224.44	83	0.00				1.00		
1850	4403539.	Caustic Soda 50%		52 gal dru	L	1.46	12.17		632.84	245.00			471,220.00	15	165.00	115,000.58	6	0.00				1.00		
1710*	4404001.	Cleaner (butyl)		1 Gal Pl B	L		8.60	1.00	8.60	2.00		1.00	8.60	9	3.00	25.80	3	3.00		100.00		1.00		
1970	4404002.	Cleaner		15oz Sp C	L	1.57	13.00	0.12	1.53	72.00		72.00	110.16	17	60.00	91.89	18	96.00		100.00		1.00		
2350	4404004.	Dust off		15oz Sp Ca	L	1.19	9.95	0.12	1.16	75.00		97.00	112.50	7	96.00	111.81	4	100.00		100.00		1.00		
2450	4404006.	Cleaner		16oz Sp C	L	1.50	12.50	0.13	1.56	19.00		11.00	17.16	1	3.00	4.69	0	85.00		100.00		1.00		
2630	4404008.	Paint Stripper		16oz Sp C	L		7.50	0.13	0.94	3.00		8.00	7.52	7	18.00	16.92	9	31.00		100.00		1.00		
5750	4404009	Simple Green		1 Gal	L	1.03	8.55	1.00	8.55	0.00		228.00	1,949.40	0				0.00						
	4404010	Soap Zep		50lb drum	S				50.00	8.00		3.00	150.00	1				0.00						
2490	4405025.	Ethylene Glycol		55 Gal Dm	L	1.10	9.17	55.00	515.00	18.00		15.00	7,725.00	0	19.00	9,785.00	0	0.00		100.00		1.00		

NUM	Part no	Material	Cf ea	Container size	Form	Density	Lb/gal	Gal/ea	Lbs/each	95units	95lbs	94units	94LBS	94Inven	93units	93LBS	93Inven	Voc	Lbs voc	Evap	Voc evap	Adjus1	Note	Adj voc ev
1290	4406008.	Ammonium Hydroxide		55 Gal Dm	L	0.90	7.50	55.00	375.00	198.00		289.00	108,375.00	16	274.00	102,750.00	9	0.00				1.00		
3110	4406009.	Hydrogen peroxide 30%		55 Gal Dm	L	1.13	9.44	55.00	500.00	404.00		352.00	176,000.00	23	266.00	133,000.00	10	0.00				1.00		
3100	4406010	Hydrogen peroxide		1 Gal Btl	L	1.13	9.44	1.00	9.44	932.00		0.00	0.00	8	32.00	298.00		0.00						
3470	4409000.	Neutralizer (acid)		32oz Btl	L		0.00	0.25	0.00	106.00		44.00	0.00	16	8.00	0.00	12	0.00		50.00		1.00		
5010	4409005.	Racon 11		200lb Dm	L	1.48	12.30	16.21	200.01	5.00		0.00	0.00	10	6.00	1,200.07	3	100.00		100.00		1.00	1,200 Exempt from DEQ reproting	
5018	4409006.	Racon 22	130.68	30# Dm/li	G	1.20	10.00	3.00	30.00	32.00		52.00	1,560.00	13	41.00	1,230.00	10	0.00		100.00		1.00	Exempt from DEQ reproting	
6470	4409007.	Vector HTS		55 Gal Dm	L	1.01	8.42	55.00	463.12	15.00		29.00	13,430.48	4	22.00	10,188.65	8	0.00		72.00		1.00		
6450	4409008.	Vector HTR		55 Gal Dm	L	1.05	8.75	55.00	481.46	33.00		20.00	9,629.20	5	1.00	481.46	1	0.00		60.00		1.00		
6472	4409009	Vector HTS		55 Gal Dm	L	1.01	8.42	55.00	463.12	38.00		9.00	4,168.00	8				0.00						
3018	4419000	Acid Hydrofluoric		Bulk Tank;	L		0.00		1.00	160,000.00		110,842.00	110,842.00	28258	105,796.00	105,796.00	35820	0.00		100.00		1.00		
2994*	4419001.	Acid Hydrochloric		55 Gal Dm	L	1.11	9.26	55.00	509.48	38.00		46.00	23,436.00	3	28.00	14,265.39	6	0.00				1.00		
3970	4419002.	Acid Nitric		Bulk tank;	L	1.50	12.50	0.08	1.00	842,720.00		432,800.00	432,800.00	44000	338,403.00	338,403.00	37600	0.00		100.00		1.00		
2990	4419003.	Acid Hydrochloric		1 Gal Btl	L	1.10	9.17	1.00	9.17	0.00		0.00	0.00	0	0.00	0.00	0	0.00		100.00		1.00		
3014	4419004.	Acid Hydrofluoric 49%		55 Gal Dm	L		10.00	50.00	500.00	85.00		17.00	8,500.00	0	5,600.00	5,600.00	1	0.00		100.00		1.00		
4670	4419005.	Stripper		1 Gal (4 G	L	1.04	8.67	1.00	8.67	100.00		28.00	242.76	9	29.00	251.44	4	100.00		100.00		1.00		
3710	4419006.	Developer		1 Gal	L	1.00	8.33	1.00	8.34	132.00		45.00	375.30	11	64.00	533.57	13	0.00		96.00		1.00		
1210	4419007.	Aluminum Etchant 16:1:1:2 SEMI		1 Gal (4 G	L	1.60	13.30	1.00	13.34	100.00		26.00	346.84	13	32.00	426.85	9	0.00				1.00		
2998*	4419008.	Acid Hydrochloric		1 Gal Btl	L	1.11	9.26	1.00	9.26	736.00		1,532.00	14,186.32	204	1,439.00	13,328.60	75	0.00		100.00		1.00		
1010	4419009.	Acid Acetic		2.5 ltr B	L	1.04	8.74	0.66	5.78	81.00		101.00	583.78	25	84.00	485.22	14	100.00		1.00		1.00		
3970	4419012	Acid Nitric		55 Gal DM					575.00	24.00		24.00	13,800.00	2	23.00	13,225.00		0.00						
3002*	4419018.	Acid Hydrochloric		55 Gal Dm	L	1.11	9.26	55.00	509.48	75.00		42.00	21,398.26	3	41.00	20,888.61	4	0.00		100.00		1.00		
5534	4426001.	Silica-Colloidal		55 Gal Dm	L	1.25	10.40	55.00	625.00	438.00		349.00	218,125.00	21	358.00	223,750.00	5	0.00				1.00		
5538	4426003.	Silica-Colloidal		55 Gal Dm	L	1.40	11.60	55.00	641.95	0.00		0.00	0.00	0	8.00	5,135.59	0	0.00				1.00		
5530*	4426005.	Silica-Colloidal		10 KG(2.5	L	1.05	8.75	2.52	22.04	7,472.00		4,590.00	101,163.00	240	5,118.00	113,000.00	492	0.00				1.00		
4660	4426009	XLS3482		55 Gal Dm	L	1.07	8.92	55.00	490.60	0.00		56.00	27,473.60	0				0.00						
4730	4426122.	Potassium dichromate		5 lb Btl	S	2.69	22.40		5.00	32.00		36.00	180.00	16	24.00	120.00	6	0.00				1.00		
2470	4436101.	Alcohol (Ethanol) Vanzol		55 Gal Dm	L	0.80	6.66	55.00	363.00	18.00		18.00	6,534.00	1	10.00	3,630.00	0	100.00		100.00		1.00	HW - 494 Lbs	
690	4436501.	Alcohol (butyl)		55 Gal Dm	L	0.81	6.75	55.00	374.00	0.00		0.00	0.00	0	32.00	11,968.00	0	100.00		10.00		1.00		
1670*	4436503.	Butyl Acetate		55 Gal Dm	L	0.88	7.35	55.00	404.43	0.00		0.00	0.00	0	0.00	0.00	0	100.00		85.00		1.00		
1030	4439001.	Acetone		55 Gal Dm	L	0.79	6.59	55.00	358.00	10.00		11.00	3,938.00	1	13.00	4,718.10	1	100.00		90.00		1.00	HW - 362 Lbs, OWW 360	
3262	4439201.	Alcohol (Isopropyl)		55 Gal Dm	L	0.79	6.58	55.00	362.00	94.00		87.00	31,494.00	5	82.00	29,684.00	0	100.00		83.00		1.00	HW- 2438 Lbs, OWW - 4940 Lbs	
4590	4439205.	Phenolphtalein		100 ml	L	0.90	7.50	0.03	0.20	23.00		18.00	3.60	5	25.00	4.96	6	0.00				1.00		
5830	4439206.	Sodium Hydroxide		1 Gal	L	1.01	8.42	1.00	8.42	12.00		12.00	16.84	9	5.00	42.10	13	0.00				1.00		
4770	4439207.	Potassium Permanganate		1 Gal Btl	L	1.00	8.33	1.00	8.34	42.00		47.00	391.51	10	68.00	566.92	23	0.00				1.00		
6102*	4439208.	Acid Sulfuric		1 Gal Btl	L		0.00	1.00	0.00	37.00		42.00	750.00	10	47.00	0.00		0.00				1.00		
1750	4439450.	Calcium Chloride 77-80%		50 lb Bag	S	1.85	15.40		50.00	75.00		117.00	5,850.00	54	63.00	3,150.00	12	0.00				1.00		
5370	4439451.	Sel-102p		55 Gal Dm	L	1.19	9.92	55.00	545.66	1.00		5.00	2,728.30	1	1.00	5,456.57	3	0.00				1.00		
5396	4439452.	Sel-281		55 Gal Dm	L	1.00	8.33	55.00	458.54	0.00		2.00	91.08	0	4.00	1,834.14	1	0.00				1.00		
5386	4439453.	Sel-154		30 Gal Dm	L	1.28	10.60	30.00	320.14	0.00		9.00	2,881.26	0	14.00	4,481.97	2	0.00				1.00		
5378	4439454.	Sel-113			L	1.17	9.75		0.00	0.00		0.00	0.00	0	0.00	0.00	0	0.00				1.00		
5394	4439455.	Sel-224		55 Gal Dm	L	1.08	9.00	55.00	495.22	0.00		6.00	2,971.32	0	5.00	2,476.09	2	0.00				1.00		
5390	4439456.	Sel-167		30 Gal Dm	L	0.98	8.17	30.00	245.11	0.00		1.00	245.11	0	3.00	735.32	1	0.00				1.00		

NUM	Part no	Material	Cf ea	Container size	Form	Density	Lb/gal	Gal/ea	Lbs/each	95units	95lbs	94units	94LBS	94inven	93units	93LBS	93inven	Voc	Lbs voc	Evap	Voc evap	Adjus1	Note	Adj voc ev
1590	4439458.	Bleach (see sodium hyperchlorite)		1 Gal Btl	L	1.09	9.08	1.00	9.09	0.00		0.00	0.00	0	0.00	0.00	0	0.00		95.00		1.00		
	4439460.	Silica Standard Solution		1 Gal	L	1.09	9.08	1.00	9.08	13.00		23.00	208.84	4				0.00						
6170	4439462.	Surfactant		1 Gal	L	1.07	8.92	1.00	8.92	12.00		23.00	205.16	3	26.00	231.94	8	0.00				1.00		
3815L	4439463	Molybdate		gal	I	1.25	10.42	1.00	10.42	13.00		23.00	239.60	5	22.00			0.00						
1270L	4439464.	Reagent Amino Acid F		1 Gal	S	2.29	19.00	1.00	19.09	13.00		23.00	439.07	5	24.00	458.20	4	0.00				1.00		
5870	4439465.	Sodium Metabisulfite		50 lb Bag	S	1.48	12.30		50.00	36.00		21.00	1,050.00	8	26.00	1,300.00	7	0.00				1.00		
6110	4439466.	Acid Sulfuric		1 Gal Btl	L		0.00	1.00	0.00	17.00		11.00	61,675.00	11	6.00	0.00	14	0.00				1.00		
6094*	4439467.	Acid Sulfuric		1 L Btl	L		0.00	1.06	0.00	32.00		23.00	6,750.00	23	37.00	0.00	44	0.00				1.00		
5350	4439468.	Antifoam		55 Gal Drn	L	1.00	8.33	55.00	470.00	72.00		50.00	23,400.00	5	83.00	39,010.00	4	0.00				1.00		
6260	4439469	TMAH		1 Gal PlBt	L	1.10	9.17	1.00	9.17	988.00		3.00	27.50	3				0.00						
1260	4439470	TMAH		55 Gal Drn	L	1.10	9.17	1.00	9.17	58.00		3.00	27.50	3				0.00						
5630	4443900	Silicon Hyperpure		KG	S	2.33	19.40		2.20	69.00		269.00	5,918.00	1087	607.00	1,338.19	748	0.00		0.00		1.00		
1230	4445005.	Aluminum Oxide - 15 micron Grade 1		135LB Drn	S	3.75	31.20		135.00	358.00		117.00	15,795.00	28	70.00	20,365.80	13	0.00				1.00		
1234	4445007.	Aluminum Oxide - 15 micron Grade 2		135LB Drn	S	3.75	31.20		135.00	0.00		610.00	82,350.00	0	63.00	18,329.22	29	0.00				1.00		
	4445009	Aluminum Oxide - 7 micron		116 lb Drn					116.00	612.00		87.00	10,092.00	9				0.00						
	4445012	Aluminum Oxide - F01200 Size 7		22 lb Bag					22.00	100.00		734.00	16,181.00	100				0.00						
1238*	4445500.	Aluminum Oxide - F90-100; Fujimi #21421		Kg			0.00		0.00	50.00		450.00	0.00	500	951.00	0.00	150	0.00				1.00		
1242	4446001.	Aluminum Oxide - Microgrit WCA-30		20 KG Box	S	3.75	31.20		44.10	80.00		77.00	3,395.70	15	60.00	2,646.00	0	0.00				1.00		
4985	4446005	Abrasive Quartz Powder		50 KG Bag	S				110.23	340.00		165.00	18,188.13	60				0.00						
4990	4455103.	RP team		55 Gal Drn	L	1.13	9.42	55.00	518.00	7.00		18.00	9,324.00	4	13.00	6,734.00	3	0.00		1.00		1.00		
3850	4459300.	Lubricat spray		11oz Sp Ca	L	1.00	8.33	0.09	0.72	3.00		8.00	5.76	8	1.00	0.72	10	37.00		90.00		1.00		
3870	4459301.	Grease		14oz Tube	S	0.90	7.50	0.11	0.82	30.00		22.00	18.04	6	29.00	23.72	7	0.00		4.00		1.00		
2790*	4459302.	Grease		5.3oz Tube	S		0.00		0.33	16.00		14.00	4.62	7	22.00	7.29	5	0.00				1.00		
2750	4459303.	Grease		14.5oz Tub	S	0.82	6.89		0.91	88.00		46.00	41.86	14	29.00	26.28	12	0.00				1.00		
2730*	4459304.	Grease		1 KG Can	S		2.20		2.20	0.00		1.00	2.20	1	1.00	2.20	1	0.00				1.00		
2836	4459305	Grease								0.00		0.00	0.00	2				0.00						
2770	4459307.	Grease		100 Gm Tub	S	0.89	7.45		0.22	6.00		4.00	0.88	1	5.00	1.10	2	0.00				1.00		
2835	4459308	Grease		16 oz tube	S	0.88	7.34		1.00	3.00		2.00	2.00	1				0.00						
1730	4459712.	Lubricant		16oz Sp Ca	L	0.81	6.80	0.13	0.85	211.00		254.00	215.90	75	174.00	148.09	29	70.00		70.00		1.00		
4550	4459714.	Parker O-LUBE		4oz Tube	S	0.90	7.50		0.23	8.00		16.00	3.68	6	10.00	2.25	8	0.00				1.00		
1734	4459715.	Lubricant		1 Gal Pl B	L	0.81	6.80	1.00	6.81	7.00		26.00	177.06	12	18.00	122.56	8	70.00		70.00		1.00		
2810	4459716.	Grease		14.5oz Tub	S	0.90	7.50		0.91	19.00		48.00	43.68	13	48.00	43.50	13	0.00				1.00		
6190	4459717.	Lubricant		20oz Sp Ca	L	0.80	5.00	0.16	0.78	5.00		12.00	6.24	8	6.00	4.68	4	82.00		100.00		1.00		
2330	4459718.	Teflon Lube		16oz Sp Ca	L	0.80	5.00	0.13	0.63	8.00		6.00	3.78	6	4.00	2.50	3	85.00		100.00		1.00		
3830	4459719.	Lubricant		19oz Sp Ca	L	0.80	6.66	0.15	1.00	1.00		0.00	0.00	11	0.00	0.00	11	91.00		100.00		1.00		
4310	4459720.	Oil Lubricant		17oz Sp Ca	L	1.00	8.33	0.13	1.11	2.00		0.00	0.00	6	4.00	4.44	0	13.00		100.00		1.00		
3890	4467300.	Neoprene		16oz Btl	L	0.81	6.80	0.13	0.85	10.00		1.00	0.85	1	4.00	3.40	2	88.00		83.00		1.00		
6270	4467305.	Adhesive		5 Gal Pail	L	0.90	7.10	5.00	35.50	0.00		20.00	71.00	0	2.00	71.00	0	64.90		100.00		1.00		
2930	4476200.	Helium	291.00	291cf Cyli	G		0.00		0.00	1.00		1.00	0.00	4	11.00	0.00	5	0.00		100.00		1.00		
4070	4476201.	Nitrogen	304.00	304 cf Cyl	G		0.00		0.00	108.00		0.00	0.00	0	10.00	0.00	0	0.00		100.00		1.00		
2950	4476202.	Helium	291.00	291cf Cyli	G		0.00		0.00	43.00		44.00	0.00	5	45.00	0.00	4	0.00		100.00		1.00		
1150	4476203.	Gas Zero	230.00	230cf Cyl	G		0.00		0.00	3.00		1.00	0.00	4	4.00	0.00	4	0.00				1.00		

NUM	Part no	Material	Cf ea	Container size	Form	Density	Lb/gal	Gal/ea	Lbs/each	95units	95lbs	94units	94LBS	94Inven	93units	93LBS	93Inven	Voc	Lbs voc	Evap	Voc evap	Adjus1	Note	Adj voc ev
3090	4476204.	Hydrogen	230.00	230cf Cyli	G		0.00		0.00	0.00		5.00	0.00	0	23.00	0.00	0	0.00				1.00		
4074	4476205.	Nitrogen	230.00	230cf Cyli	G		0.00		0.00	320.00		247.00	0.00	21	124.00	0.00	27	0.00		100.00		1.00		
4350	4476206.	Oxygen	337.00	337cf Cyli	G		0.00		0.00	43.00		19.00	0.00	4	12.00	0.00	4	0.00		100.00		1.00		
1450*	4476207.	Argon	336.00	336cf Cyli	G		0.00		0.00	130.00		114.00	0.00	10	127.00	0.00	7	0.00		100.00		1.00		
1070	4476208.	Acetylene	330.00	330cf Cyl	G		0.00		0.00	0.00		2.00	0.00	0	1.00	0.00	2	~~100.00~~		100.00		1.00		
3030*	4476209.	Hydrogen	8.00	8 SCF Cyli	G		0.00		0.00	7.00		1.00	0.00	5	7.00	0.00	3	0.00				1.00		
3070	4476210.	Hydrogen chloride	636.00	60lb Cylin	G	0.93	7.76	7.73	60.00	1,164.00		1,007.00	60,420.00	77	882.00	52,920.00	44	0.00		100.00		1.00		
3130	4476212.	Hydrogen	300.00	300 cf Cyl	G		0.00		0.00	0.00		0.00	0.00	0	71.00	0.00	0	0.00		100.00		1.00		
5470	4476213.	Silane	264.55	10 KG Cyl	G	0.68	5.66	1.84	22.05	17.00		0.00	0.00	0	10.00	220.00	0	0.00		100.00		1.00		
6280	4476215	Trichlorosilane		Gas Cyl; 5	L	1.48	12.40	44.35	550.00	116.00		93.00	51,150.00	6	84.00	46,788.00		0.00		100.00		1.00		
35	4476217	Nitric Oxide							0.00	5.00		2.00	0.00	2				0.00						
3050	4476220.	Hydrogen	1.00	18K @ 80 P	G	0.05	0.45	0.01	0.00	533,996.00		511,908.00	0.00	4310	124,067.00	495.71	25200	0.00		100.00		1.00		
1430	4476221.	Argon	1.00	11000 Gal	G	1.40	11.60	0.01	0.10	111,697.00		103,767.00	10,376.70	11649	92,039.00	9,552.33	11021	0.00		100.00		1.00		
4010	4476223.	Nitrogen	1.00	6000 Gal T	G	0.80	6.73	0.01	0.07	0.00		0.00	0.00	6356	44,417.00	3,213.47	0	0.00		100.00		1.00		
4014	4476224.	Nitrogen	1.00	11000 Gal	G	0.80	6.73	0.01	0.07	579,511.00		480,405.00	33,628.35	16638	410,898.00	29,727.57	29519	0.00		100.00		1.00		
4018	4476225.	Nitrogen	1.00	13000 Gal	G	0.80	6.73	0.01	0.07	472,965.00		426,230.00	29,836.10	30472	386,163.00	27,938.05	38534	0.00				1.00		
5790	4479901.	Snoop		8oz Tube	L	1.00	8.33	0.06	0.52	21.00		46.00	383.00	0	17.00	8.86	17	0.00				1.00		
2602	4489007.	Defluxer		16oz Sp Ca	L	1.47	12.20	0.13	1.53	15.00		17.00	26.01	11	31.00	47.49	16	5.00		100.00		1.00		
6150	4489012.	Wax		1 Gal Pl B	L	0.91	7.66	1.00	7.67	0.00		0.00	0.00	6	4.00	30.66	6	95.00		100.00		1.00		
3550	4489013.	Liqui-nox		1 Qt	L	1.07	8.96	0.25	2.24	6.00		2.00	4.48	2	0.00	0.00	4	0.00				1.00		
5770*	4489014.	Wax Sticks		1 lb Stick	S		0.00		1.00	14.00		1.00	1.00	9	16.00	16.00	0	0.00				1.00		
1650*	4489015.	Buffer solution		16oz Pl Bt	L		0.00	0.13	0.00	14.00		239.00	0.00	50	236.00	0.00	23	0.00				1.00		
1770*	4489016.	Ammonia		3 x 3 Grn p	S		0.00		0.01	0.00		0.00	0.00	1	0.00	0.00	1	0.00				1.00		
1330	4489017.	Ammonium Laurel Sulfate		5 Gal Btl	L	1.02	8.54	5.00	42.73	5.00			650.00	1	7.00	299.09	0	0.00				1.00		
3930*	4489019.	Ammonia		50 ml Pl B	L		0.00	0.01	0.00	0.00		0.00	0.00	2	0.00	0.00	2	0.00				1.00		
6210	4489020.	Surfactant		5 Gal Btl	L	0.99	8.29	5.00	41.48	16.00		13.00	539.24	5	8.00	331.81	5	0.00				1.00		
3610	5405003.	Lutensol AP 10		53 Gal Dm	L	1.06	8.83	52.39	462.98	58.00		50.00	23,149.00	36	35.00	16,204.37	2	0.00				1.00		
510	5405005.	Cavlclean #2		55 Gal Dm	L	1.05	8.75	55.00	481.46	13.00		10.00	4,814.60	1	9.00	4,333.16	1	12.00				1.00		
4970	5405007.	Q9		53 Gal Dm	L	1.21	10.00	52.84	533.04	162.00		150.00	79,956.00	23	153.00	81,544.78	68	0.00		74.00		1.00		
6430	5405015.	9N9		55 Gal Dm	L	1.05	8.81	55.00	480.00	50.00		130.00	62,400.00	7	144.00	69,120.00	6	0.00				1.00		
2710*	5405030.	Glycerine		55 Gal Dm	L	1.26	10.50	55.00	570.00	0.00		0.00	0.00	0	40.00	22,800.00	0	0.00		0.00		1.00		
1930	5405101.	Acid Citric		100 lb Bag	S	1.66	13.80		100.00	294.00		595.00	59,500.00	27	416.00	41,600.00	7	0.00		0.00		1.00		
4710	5426101.	Potassium Carbonate, anhydros		350lb Dm	S	2.29	19.00		225.00	673.00		577.00	129,825.00	30	527.00	118,700.00	13	0.00		0.00		1.00		
4750	5426102.	Potassium Hydroxide		110lb Dm	S	2.04	17.00		110.00	2,424.00		2,466.00	271,260.00	123	2,233.00	245,630.00	36	0.00		0.00		1.00		
5570	5445005.	Silicon Carbide		50 KG Dm	S	3.20	26.60		110.23	0.00		0.00	0.00	0	197.00	21,715.31	23	0.00				1.00		
4650	5455100.	Plasti-Dip		16 oz can	L	0.93	7.75	0.13	1.00	6.00		6.00	6.00	6				85.00		100.00				
5230	5455103	Rust Inhibitor		50KG Dm/I	L	1.12	9.40	11.73	110.26	0.00		0.00	0.00	0	7.00	771.83	0	0.00				1.00		
5250	5455105	Rust Penetrant		Can						0.00		0.00	0.00	0				0.00						
1350	5455107	Anti selze		Btl						0.00		0.00	0.00	3				0.00						
5670	5455108.	Aerosol Lubricant		20oz Sp Ca	L	0.80	6.66	0.16	1.04	3.00		6.00	4.16	7	6.00	6.24	5	85.00		100.00		1.00		
2830	5455109.	Grease		20oz Sp Ca	L	0.90	7.50	0.16	1.17	7.00		6.00	7.02	3	2.00	2.34	4	85.00		6.00		1.00		
2	5455110	Paint Kar #77343-1		16 oz SpCa	L				1.40	2.00														

NUM	Part no	Material	Cf ea	Container size	Form	Density	Lb/gal	Gal/ea	Lbs/each	95units	95lbs	94units	94LBS	94inven	93units	93LBS	93inven	Voc	Lbs voc	Evap	Voc evap	Adjus1	Note	Adj voc ev
	5455111	Paint Kar		16 oz SpCa	L				1.40	1.00														
6420	5465002	Valtron		1 gal can	s			1.00	1.00	68.00		52.00	52.00	20				40.00		100.00				
6410	5465003.	Adhesive Catalyst		16oz Can	L		1.10	9.17	0.13	1.15	53.00		57.00	65.50	5	162.00	185.71	19	40.00		50.00		1.00	
8888	5465005	Epoxy fast cure grey		10 oz can					0.63	0.63	820.00		85.00	53.12	2				85.00		100.00			
4630*	5466000.	Glue		80 Gm Stic	S			0.00		0.00	0.00		0.00	0.00	16	0.00	0.00	16	0.00				1.00	
6010	5466001.	Wax		8gm Stick	S		0.98	8.18		0.98	0.00		0.00	0.00	12	0.00	0.00	12	0.00				1.00	
5070	5466012.	Resin		25 KG Bag	S			0.00		55.12	264.00		238.00	13,118.50	8	207.00	11,409.84	87	0.00				1.00	
2290	5466014.	Diatomaceous Earth		50lb Bag	S		2.30	19.10		50.00	1.00		1.00	50.00	1	2.00	100.00	0	0.00		0.00		1.00	
2110	5466015.	Dye Crystal violet		100gm Can	S			0.00		0.22	16.00		9.00	1.98	1	6.00	1.32	1	0.00				1.00	
[illegible]	5466016.	Wiz #F-57		1 Gal Can	L		0.95	7.92	1.00	7.92	4.00		8.00	63.36	3	12.00	95.04	3	94.00		94.00		1.00	
[illegible]0	5466017.	Cleaner		1 Gal Can	L		1.06	8.83	1.00	8.84	1.00		3.00	26.52	1	0.00	0.00	2	64.00		100.00		1.00	
6250	5467301.	TIXO-K10		10 Gm Tube	L		1.05	8.75	0.00	0.02	89.00		85.00	1.70	33	77.00	1.79	25	0.00				1.00	
6230	5467302.	Threadlocker		10 ml Tube	L		1.10	9.17		0.90	33.00		27.00	24.30	17	26.00	23.40	12	0.00				1.00	
1190	5467303.	Adhesive		20oz Sp Ca	L		0.70	5.83	0.16	0.91	6.00		12.00	10.92	6	6.00	5.40	4	88.00		100.00		1.00	
5510*	5716605.	Dessicant		15 gm pack	S			0.00		0.03	33,950.00		28,050.00	841.50	15150	23,699.00	782.07	12400	0.00				1.00	
	8016045	Oil DP HE 300		500mL Btl	L		0.91	7.58	0.13	1.00	1.00		4.00	4.00	1				0.00					

2005 VOC Summary	tons
VOCs used	16.66
VOCs in wastes and wastewater	3.98
VOCs unrecovered from purchased products	12.68
VOCs from fuel burning equipment	0.50
Total VOC emissions	13.18

Air Emissions Calculations for 2005

Emissions from burning natural gas

Natural gas usage:	
Month	10^6 cf
Jan	19.311
Feb	16.676
Mar	16.127
Apr	14.269
May	11.519
Jun	9.877
Jul	9.433
Aug	9.829
Sep	10.174
Oct	11.384
Nov	14.604
Dec	17.890
Total (10^6 cf/year)	161.093

yellow shading indicates user input information
From montly natural gas bills

AP-42 emission factors, Vol. I, Table 1.4-1:			
Particulate	3	lb/10^6 cf	(avg of 1 to 5 lb/10^6 cf)
CO	35	lb/10^6 cf	
NOx	140	lb/10^6 cf	
SOx	0.6	lb/10^6 cf	
VOCs	5.8	lb/10^6 cf	(nonmethane+methane)

Assuming all fuel fired equipment behaves according to AP-42,
we can calculate using the annual natural gas usage:

	lb/year	tons/year
Particulate	483	0.24
CO	5638.3	2.82
NOx	22553	11.28
SOx	97	0.05
VOCs	934	0.47

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SCOEPA00023139

2005 Emissions from burning diesel fuel in emergency generators

AP-42 emission factors, Vol. I, Table 3.4-1 (as referenced on Page 3 of ACDP Application Review Report Attachment):

	g/hphr
Particulate	0.24
CO	2.4
NOx	11
SOx	1.1
VOCs	0.33

Values used in calculating emissions:

6.9	test usage, in hr	38	test usage, in hr	temporary generator (200KW) 10	hours
	shutdown usage, in hr	16	shutdown usage, in hr		
400	kW rated power (Generator #1)	1000	kW rated power (Generator #2 and Generator #3)	200	kW rated power
536.4	hp, converted using 1.341 hp = 1 kW	1341	hp, converted using 1.341 hp = 1 kW	268.2	hp, converted using 1.341 hp = 1 kW
0.25	typical load factor (power used/power rating)	0.5	typical load factor (power used/power rating)	1	typical load factor (power used/power rating)

Note: Hours of operation are from the generator log sheets.

The equation given by AP-42 is: hr*hp*load factor*emission factor

This yeilds the following emission estimates:

	lb/year	tons/year
Particula	67	0.03
CO	193	0.10
NOx	694	0.35
SOx	117	0.06
VOCs	72	0.04

Notes: Load factors based on conservative estimates of shutdown loads and preventative maintenance test loads.

VOC units

2005 Units of Item Purchased by Month		1	2	3	4	5	6	7	8	9	10	11	12	
Part No. SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total consumption
5406902-1	Spray paints*	0	2	6	0	0	0	8	8	1	0	2	0	27
5407102	SEALANT silicon clear 3 oz tube	0	0	0	2	0	0	0	0	0	0	0	0	2
5407103	SEALANT silicone white 10.3 OZ tube	0	0	0	0	0	0	0	0	0	0	0	0	0
5407104	SEALANT rubber silicone RTV GE#W102	0	2	0	0	0	0	0	1	0	0	0	0	3
5407105	PASTE SILICON P12 WARMELEITPASTE	0	0	0	0	0	0	0	0	0	0	0	0	0
5407106	SILICONE RTV high temp red mak-a-gasket	0	0	0	2	0	0	2	1	0	0	0	0	5
5407107	SILICONE RTV HIGH TEMP BLUE MAK-A-GAS	0	0	2	0	0	0	0	3	0	0	0	0	5
5407108	SILICONE RTV HIGH TEMP CLEAR	4	0	6	2	0	2	2	2	0	1	0	0	19
5407328	CLEANER instant contact #CRC-03070	0	2	0	1	0	0	2	0	2	4	0	0	11
5407330	CLEANER DUST CHASER SPRAY	0	12	12	4	9	5	3	7	11	0	0	15	63
5407331	DEGREASER gel engine	0	0	0	0	0	0	0	0	0	0	0	0	0
5407332	CLEANER electric motor KAR #65390-2	0	0	0	0	0	0	0	0	0	0	0	0	0
5407334	STRIPPER/REMOVER PAINT, CARBON & GAS	0	0	0	0	0	0	0	0	0	0	0	0	0
5407376	ISOPROPYL ALCOHOL (IPA) 99%	5	4	5	4	5	3	6	4	6	4	5	4	51
5407408	Lubricant Spray Molykote 321R Dow-Corning	0	0	0	0	0	0	0	0	0	0	0	0	0
5407431	LUBRICANT CRC 3-36 16oz can	6	0	12	0	12	0	0	0	5	12	3	12	50
5407432	LUBRICANT Parker-O-Lube #884-4	0	0	2	0	0	0	0	2	1	0	0	0	5
5407433	LUBRICANT CRC 3-36 (1 gallon)	0	0	0	0	0	0	0	0	2	0	0	0	2
5407434	GREASE ALVANIA EP 2 LITHIUM BASE	0	1	3	0	0	3	4	0	5	4	1	3	21
5407435	LUBE teflon #79417	0	0	0	0	0	0	0	0	0	0	0	0	0
5407436	LUBRICANT teflon dry #79418	0	0	0	0	0	0	0	0	0	0	0	0	0
5407437	LUBRICANT MOLY HIGH TEMP	0	0	0	0	0	0	0	0	0	0	0	0	0
5407438	LUBE OPEN CHAIN & SPROCKET #65389	0	0	0	0	0	0	0	0	1	0	0	0	1
5407439	Cement Neoprene Turntable Covering Carbo	0	0	0	0	0	0	0	0	0	0	0	0	0
5407466	Skyliquid Wax for Enya, HF-3511	0	0	0	0	0	0	0	0	0	0	0	0	0
5407470	CLEANER zero residue instant tech spray	0	0	0	0	0	0	0	0	0	0	0	0	0
5407938	Caviclean #2 Cleaning Solution Turco	0	0	0	0	0	0	0	0	0	0	0	0	0
5407946	Anti-sieze High Temp Industrial, 1 lb	0	0	0	0	0	0	0	0	0	0	0	0	0
5407947	LUBRICANT SILICON	0	0	0	0	0	0	0	0	1	0	0	0	1
5407948	GREASE MULTI PURPOSE WHITE	2	0	0	0	0	0	0	0	0	1	0	0	3
5407950	PAINT OSHA orange spray can	0	0	0	0	0	0	0	0	0	0	0	0	0
5407953	VINNAPAS C305 (solution) 1 liter	0	0	0	0	0	0	0	0	0	0	0	0	0
5407955	EPOXY VALTRON AD1230 4-1 GAL/CS PART A	3	0	0	0	0	0	0	0	0	0	0	0	3
5407956	Hardner AD1211-B Red Pigment	0	0	0	0	0	0	0	0	0	0	0	0	0
5407957	Epoxy STC Fast Cure Grey	0	0	0	0	0	0	0	0	0	0	0	0	0
5407963	Mold-Release Wiz F-57NC 1 Gallon	0	0	0	0	0	0	0	0	0	0	0	0	0
5407966	ADHESIVE 10ML blue thred	0	0	2	0	0	2	0	0	0	0	0	0	4
5407967	ADHESIVE all purpose & trim #77160	3	0	2	0	0	0	0	0	0	0	0	0	5
5410534	OIL AEROKROIL LOOSENS FROZEN METAL F	2	0	0	4	8	3	0	0	0	0	4	4	21
5410872	PAINT spray yellow	0	0	0	0	0	0	0	0	0	0	0	0	0
5413542	WAX SKYLIQUID CLEAR HF4011 2 LITER	348	180	366	294	384	276	294	233	210	486	204	360	3275
5516514	BOTTLE IPA high purity (4x1-gal cs)	18	25	17	21	23	24	16	27	16	15	13	12	215
5522458	WAX Thin Skyliquid KN-25449 2ltr/btl	12	12	30	18	24	48	30	42	6	24	0	12	246
5527433	TISAB II WITH CDTA	2	3	2	4	4	5	1	4	2	3	2	1	32
	Parts Washing Solvent	120				120			110					
* this category contains part numbers 5406902-12														
Part No. SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total consumption
5406902	PAINT Krylon white enamel glossy	0	2	0	0	0	0	1	4	0	0	0	0	7
5406903	PAINT gray primer 2X982 16 OZ.	0	0	0	0	0	0	4	4	1	0	2	0	11
5406904	PAINT SUPERCOAT 316L SS AEROSOL CAN	0	0	6	0	0	0	3	0	0	0	0	0	9
5406907	PAINT Equipment Orange	0	0	0	0	0	0	0	1	0	0	0	0	1
5406908	PAINT Ford red	0	0	0	0	0	0	0	3	0	0	0	0	3
5406909	PAINT high heat black	0	0	0	0	0	0	2	0	0	0	0	1	2
5406910	PAINT Chrysler blue	0	0	0	0	0	0	0	0	1	0	1	0	2
5406912	PAINT glossy black spray can #84000	1	0	0	0	0	0	0	0	0	2	0	1	3

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SAP Material Number		Container Size	Form	Density/ Specific Gravity	Lb/gal	Gal/each	Lb/each	Fraction of product used	VOC Fraction	Evap Fraction	Total Evap Factor	MSDS Number	Date added to list or revised
5406902-1	Spray paints		L				0.9393	1	0.85	1	0.85		
5407102	Sealant silicon clear 3 oz tube		L				0.1875	1	0.025	1	0.025		
5407103	Sealant Silicone White 10.3 OZ tube	10.3oz Tub	Paste	1.04	8.6736		0.64375	1	0.025	1	0.025	2148	
5407104	Sealant Rubber Silicone RTV GE #W102 cart	10.3oz Car	Solid	1.06	8.8404		0.64375	1	0.04	1	0.04	2575	
5407105	Paste silicon P12 Warmeleitpaste		L				0.3308	1	0.1	1	0.1		
5407106	Silicon RTV high temp red mak-a-gasket	1 can	L				0.4983	1	1	1	1		
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	8 oz Sp Can	L	1.04	8.6736	0.0625	0.5421	1	0.08	1	0.08	2337	
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	8 oz Sp Can	L	1.04	8.6736	0.0625	0.5421	1	0.08	1	0.08	2337	
5407328	Cleaner Instant Contact #CRC-02016	15oz Sp Can	L	0.8754	7.30084	0.117188	0.855567	1	0.96	1	0.96	2093	
5407330	Cleaner dust chaser spray VWR# 21899-094		L				0.62622	1	1	1	1		
5407331	Degreaser gel engine	15oz Sp Can	L	0.8	6.672	0.117188	0.781875	1	0.7	1	0.7	2660	
5407332	Cleaner Electric Motor KAR #65390-2	16oz Sp Can	L	1.5	12.51	0.125	1.56375	1	0.243	1	0.243	2169	
5407334	Stripper / Remover For Paint, Carbon &	16oz Sp Can	L	0.9	7.506	0.125	0.93825	1	0.68	1	0.68	2252	
5407376	Isopropyl Alcohol (IPA) 99%	55 Gal Dm	L	0.7855	6.55107	55	362	1	1	1	1	2580	
5407408	Lubricant Spray Molykote 321R Dow-Corning	11oz Sp Can	L	1	8.34	0.085938	0.716719	1	0.57	1	0.57	2419	
5407431	Lubricant CRC 3-36 #03005	16oz Sp Can	L	0.8167	6.81128	0.125	0.85141	1	0.7	0.1	0.07	1011	
5407432	LUBRICANT Parker-O-Lube #884-4		L				0.25	1	1	1	1		
5407433	Lubricant CRC 3-36 (Gallon Can)	1 Gal Pl Btl	L	0.8167	6.81128	1	6.811278	1	0.7	0.1	0.07	1010	
5407434	GREASE ALVANIA EP 2 LITHIUM BASE		L				0.88	1	0.8	1	0.8		
5407435	Lube Teflon #79417	20oz Sp Can	L	0.6	5.004	0.15625	0.781875	1	0.82	1	0.82	2344	
5407438	Lubricant Teflon Dry #79418	16oz Sp Can	L	0.6	5.004	0.125	0.6255	1	1	1	1	2154	
5407436	LUBE OPEN CHAIN & SPROCKET #65389	17 oz.	L	1	8.34		8.86125	1	0.125	1	0.125		
5407439	Cement Neoprene Turntable Covering Carbo	16oz Btl	L	0.81	6.7554	0.125	0.844425	1	0.8	1	0.8	2427	
5407466	Skyliquid Wax for Enya, HF-3511	2 L Pl Btl	L	0.889	7.41426	0.528346	3.917293	1	0.65	1	0.65	2631	
5407470	Cleaner Zero Residue Instant Tech Spray	16oz Sp Can	L	1.004	8.37336	0.125	1.04667	1	0.0541	1	0.0541	2803	
5407938	Caviclean #2 Cleaning Solution Turco	55 Gal Dm	L	1.05	8.757	55	481.635	1	0.12	1	0.12	2740	
5407946	Anti-sieze High Temp Industrial, 1 lb	1 lb bottle	L								0		
5407947	Lubricant Silicon	20oz Sp Can	L	0.76	6.3384	0.15625	0.990375	1	0.9	1	0.9	2340	
5407948	Grease Multi Purpose White	20oz Sp Can	L	0.9	7.506	0.15625	1.172813	1	0.24	1	0.24	2332	
5407950	PAINT OSHA orange spray can		L				0.882	1	0.7	1	0.7		
5407953	Vinnapas C305	1 liter bottle	L				0.823575	1	0.63	1	0.63		
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	4-1 Gal Cans	S	1.2	10.008	4	40.032	1	0.4	1	0.4	2750	
5407956	Hardner AD1211-B Red Pigment	16oz Can	L	1.1	9.174	0.125	1.14675	1	0.4	1	0.4	2749	
5407957	Epoxy STC Fast Cure Grey	10 oz Can	L	1.54	12.8436	0.078125	1.003406	1	0.07385	1	0.07385	2615	
5407963	Mold-Release Wiz F-57NC 1 Gallon	1 Gal Can	L	0.82	6.8388	1	6.8388	1	0.925	1	0.925	2414	
5407966	ADHESIVE 10ML blue thred		L				0.02205		100		0		
5407967	Adhesive Tixo K-10 10 Gm/Each	20oz Sp Can	L	1.05	8.757	0.15625	1.368281	1	0.88	1	0.88	2722	
5410534	Aerokroil loosens frozen metal parts		L				0.625	1	0.6	1	0.6		
5410872	PAINT spray yellow		L				0.9393	1	0.65	1	0.65		
5413542	Skyliquid Wax for Enya, HF-4011	2 L Pl Btl	L	0.902	7.52268	0.528346	3.974576	1	0.6	1	0.6	2819	
5415107		1 Gal bottle	L	0.79	6.5886	4	26.3544	1	1	1	1		
5516514	Bottle IPA high purity (4-1 gal/case)	4x1 gal/case but SAP counts gals	L	0.7855	6.55107	1	6.55107	1	1	1	1		
5527433	Tisab II with CDTA	1 Gal bottle	L	1.07	8.9238	1	8.9238	1	0.1	1	0.1		
4467305		5 Gal Pail	L	0.9	7.506	5	35.5		0.649	1	0		
5455100		16 oz can	L	0.93	7.7562	0.129	1		0.85	1	0		
5522458	Wax Thin Skyliquid KN-25449 2ltr/btl	2 L Pl Btl	L	0.87	7.2558	0.528346	3.833571	1	0.75	1	0.75		Added 1/16/04
	Parts Washing Solvent	1 Gal	L	0.79	6.6	1	6.6	1	1	1	1	2582	Added 2/8/99
	3M Scotch-Grip HP Contact Adhesive 1357	1 Qt Can	L	0.84	7.0056	0.25	1.7514	1	0.74	1	0.74		Added 1/16/02
10161	Microstrip 2001	4 gals/cs	L	1.1	9.174	4	36.696	1	1	1	1		
10201	Gear Compound EP ISO 460	5 Gal Pail	L	0.906	7.55604	5	37.7802	1	0.01	1	0.01		
* some values in the table are given by the manufacturer, others are calculated by unit conversion.													
Values in this table may be updated as appropriate.													

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Comments
Lb/each and VOC Fraction inherited with spreadsheet
MSDS in 1997 TRI Notebook
Evap Fraction left at 1 because amount discharged to POTW in waste water accounted for later; Lb/Dm from VW&R Customer Sales by Product for 1997
MSDS in 1997 TRI Notebook; Specific Gravity assumed - none listed
Evap Fraction corresponds to "slow 0.01" Evaporation Rate noted on MSDS
Evap Fraction corresponds to "slow 0.01" Evaporation Rate noted on MSDS
Specific Gravity assumed - none on MSDS
MSDS in 1997 TRI Notebook
Assumed same process test data as PN 5413542 because similar formula but used 1 because amount shippe
VOC Fraction inherited with spreadsheet
VOC Fraction inherited with spreadsheet - none on MSDS
VOC Fraction inherited with spreadsheet - none on MSDS
process test used to determine evap fraction of 0.77 but used 1 because amount shipped as waste accounts f
VWR MSDS #MZA0446
Specific Gravity and VOC fraction from Midori Sugimoto; changed fration of product used from 0.95 to 1 becau
Evap Fraction left at 1 because amount shipped as waste accounts for evaporation
MSDS not on database
evap frac assumed to be 1 since no other information is available

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Pounds VOCs Purchased (2005)

Part no SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly total
all	Spraypaints	0.00	1.60	4.79	0.00	0.00	0.00	6.39	6.39	0.80	0.00	1.60	0.00	21.56
5407102	Sealant silicon clear 3 oz tube	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
5407103	Sealant Silicone White 10.3 OZ tube	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407104	Sealant Rubber Silicone RTV GE #W102 cart	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.08
5407105	Paste silicon P12 Warmeleitpaste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407106	Silicon RTV high temp red mak-a-gasket	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.50	0.00	0.00	0.00	0.00	2.49
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.22
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	0.17	0.00	0.26	0.09	0.00	0.09	0.09	0.09	0.00	0.04	0.00	0.00	0.82
5407328	Cleaner Instant Contact #CRC-02016	0.00	1.64	0.00	0.82	0.00	0.00	1.64	0.00	1.64	3.29	0.00	0.00	9.03
5407330	Cleaner dust chaser spray VWR# 21899-094	0.00	7.51	7.51	2.50	5.64	3.13	1.88	4.38	6.89	0.00	0.00	9.39	48.85
5407331	Degreaser gel engine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407332	Cleaner Electric Motor KAR #65390-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407334	Stripper / Remover For Paint, Carbon &	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407376	Isopropyl Alcohol (IPA) 99%	1810.00	1448.00	1810.00	1448.00	1810.00	1086.00	2172.00	1448.00	2172.00	1448.00	1810.00	1448.00	19910.00
5407408	Lubricant Spray Molykote 321R Dow-Corning	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407431	Lubricant CRC 3-36 #03005	3.58	0.00	7.15	0.00	7.15	0.00	0.00	0.00	2.98	7.15	1.79	7.15	36.95
5407432	LUBRICANT Parker-O-Lube #884-4	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.50	0.25	0.00	0.00	0.00	1.25
5407433	Lubricant CRC 3-36 (Gallon Can)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.54	0.00	0.00	0.00	9.54
5407434	GREASE ALVANIA EP 2 LITHIUM BASE	0.00	0.70	2.11	0.00	0.00	2.11	2.82	0.00	3.52	2.82	0.70	2.11	16.90
5407435	Lube Teflon #79417	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407436	Lubricant Teflon Dry #79418	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407437	LUBRICANT MOLY HIGH TEMP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407438	LUBE OPEN CHAIN & SPROCKET #65389	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.63
5407439	Cement Neoprene Turntable Covering Carbo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407466	Skyliquid Wax for Enya	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407470	Cleaner Zero Residue Instant Teck Spray	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407938	Caviclean #2 Cleaning Solution Turco	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407946	Anti-sieze High Temp Industrial, 1 lb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407947	Lubricant Silicon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00	0.00	0.89
5407948	Grease Multi Purpose White	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.84
5407950	PAINT OSHA orange spray can	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407953	Vinnapas C305	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	48.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.04
5407956	Hardner AD1211-B Red Pigment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407957	Epoxy STC Fast Cure Grey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407963	Mold-Release Wiz F-57NC 1 Gallon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407966	ADHESIVE 10ML blue thred	0.00	0.00	4.41	0.00	0.00	4.41	0.00	0.00	0.00	0.00	0.00	0.00	8.82
5407967	Adhesive Tixo K-10 10 Gm/Each	3.61	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.02
5410534	OIL AEROKROIL LOOSENS FROZEN METAL	0.75	0.00	0.00	1.50	3.00	1.13	0.00	0.00	0.00	0.00	1.50	1.50	9.38
5410872	PAINT spray yellow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5413542	Skyliquid Wax for Enya, HF-4011	829.89	429.25	872.82	701.12	915.74	658.19	701.12	555.65	500.80	1158.99	486.49	858.51	8668.55
5516514	Bottle IPA high purity (4-1 gal/case)	117.92	163.78	111.37	137.57	150.67	157.23	104.82	176.88	104.82	98.27	85.16	78.61	1487.09
5522458	Wax Thin Skyliquid KN-25449 2ltr/btl	34.50	34.50	86.26	51.75	69.00	138.01	86.26	120.76	17.25	69.00	0.00	34.50	741.80
5527433	Tisab II with CDTA	1.78	2.68	1.78	3.57	3.57	4.46	0.89	3.57	1.78	2.68	1.78	0.89	29.45
	Parts Washing Solvent	790.63	0.00	0.00	0.00	790.63	0.00	0.00	724.75	0.00	0.00	0.00	0.00	2306.01
	Total Per Month:	3641.44	2089.72	2911.46	2347.93	3755.41	2054.75	3078.89	3041.61	2823.78	2790.51	2389.03	2440.67	

23,530 lbs in 2004

1,343 lbs in 2004

Total VOCs Purchased (2004): 33,365 lbs or 16.68 tons

Includes both VOC's that do and do not volatilize (ie,
for Skyliquid Wax for Enya, 77% of VOC's
will volatilize, but they are still included in these totals.
The non-volatile portion of the VOC's are not considered as being used.

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Pounds VOCs Evaporated or In Wastes (2005)

Part no SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly total
5406902	Spraypaint *	0.00	1.60	4.79	0.00	0.00	0.00	6.39	6.39	0.80	0.00	1.60	0.00	21.56
5407102	Sealant silicon clear 3 oz tube	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
5407103	Sealant Silicone White 10.3 OZ tube	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407104	Sealant Rubber Silicone RTV GE #W102 cart	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.08
5407105	Paste silicon P12 Warmeleitpaste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407106	Silicon RTV high temp red mak-a-gasket	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.50	0.00	0.00	0.00	0.00	2.49
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.22
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	0.17	0.00	0.26	0.09	0.00	0.09	0.09	0.09	0.00	0.04	0.00	0.00	0.82
5407328	Cleaner Instant Contact #CRC-02016	0.00	1.64	0.00	0.82	0.00	0.00	1.64	0.00	1.64	3.29	0.00	0.00	9.03
5407330	Cleaner dust chaser spray VWR# 21899-094	0.00	7.51	7.51	2.50	5.64	3.13	1.88	4.38	6.89	0.00	0.00	9.39	48.85
5407331	Degreaser gel engine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407332	Cleaner Electric Motor KAR #65390-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407334	Stripper / Remover For Paint, Carbon &	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407376	Isopropyl Alcohol (IPA) 99%	1810.00	1448.00	1810.00	1448.00	1810.00	1086.00	2172.00	1448.00	2172.00	1448.00	1810.00	1448.00	19910.00
5407408	Lubricant Spray Molykote 321R Dow-Corning	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407431	Lubricant CRC 3-36 #03005	0.36	0.00	0.72	0.00	0.72	0.00	0.00	0.00	0.30	0.72	0.18	0.72	3.70
5407432	LUBRICANT Parker-O-Lube #884-4	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.50	0.25	0.00	0.00	0.00	1.25
5407433	Lubricant CRC 3-36 (Gallon Can)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.00	0.00	0.00	0.95
5407434	GREASE ALVANIA EP 2 LITHIUM BASE	0.00	0.70	2.11	0.00	0.00	2.11	2.82	0.00	3.52	2.82	0.70	2.11	16.90
5407435	Lube Teflon #79417	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407436	Lubricant Teflon Dry #79418	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407437	LUBRICANT MOLY HIGH TEMP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407438	LUBE OPEN CHAIN & SPROCKET #65389	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.63
5407439	Cement Neoprene Turntable Covering Carbo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407466	Skyliquid Wax for Enya, HF-3511	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407470	Cleaner Zero Residue Instant Teck Spray	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407938	Caviclean #2 Cleaning Solution Turco	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407946	Anti-sieze High Temp Industrial, 1 lb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407947	Lubricant Silicon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00	0.00	0.89
5407948	Grease Multi Purpose White	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.84
5407950	PAINT OSHA orange spray can	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407953	Vinnapas C305	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	48.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.04
5407956	Hardner AD1211-B Red Pigment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407957	Epoxy STC Fast Cure Grey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407963	Mold-Release Wiz F-57NC 1 Gallon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407966	ADHESIVE 10ML blue thred	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5407967	Adhesive Tixo K-10 10 Gm/Each	3.61	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.02
5410534	Oil Aerokroil Loosens Frozen Metal Parts	0.75	0.00	0.00	1.50	3.00	1.13	0.00	0.00	0.00	0.00	1.50	1.50	9.38
5410872	PAINT spray yellow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5413542	Skyliquid Wax for Enya, HF-4011	829.89	429.25	872.82	701.12	915.74	658.19	701.12	555.65	500.80	1158.99	486.49	858.51	8668.55
5516514	Bottle IPA high purity	117.92	163.78	111.37	137.57	150.67	157.23	104.82	176.88	104.82	98.27	85.16	78.61	1487.09
5522458	Wax Thin Skyliquid KN-25449 2ltr/btl	34.50	34.50	86.26	51.75	69.00	138.01	86.26	120.76	17.25	69.00	0.00	34.50	741.80
5527433	Tisab II with CDTA	1.78	2.68	1.78	3.57	3.57	4.46	0.89	3.57	1.78	2.68	1.78	0.89	29.45
	Parts Washing Solvent	790.63	0.00	0.00	0.00	790.63	0.00	0.00	724.75	0.00	0.00	0.00	0.00	2306.01
	VOC's from well wastewater evaporated from WWTP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	Total Per Month:	3638.22	2089.72	2900.61	2347.93	3748.97	2050.34	3078.89	3041.61	2812.52	2784.08	2387.42	2434.24	

Total VOCs Used (2004): 33,315 lbs or 16.66 tons

VOCs to waste: 7957 lbs or 3.98 tons

Total VOCs Evaporated (2004): 25,357 lbs or 12.68 tons

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2005 Worksheet for Cleaning Solvent VOC Emissions

Part no SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly total	
5407328	Cleaner Instant Contact #CRC-02016	0.00	1.64	0.00	0.82	0.00	0.00	1.64	0.00	1.64	3.29	0.00	0.00	9.03	
5407330	Cleaner dust chaser spray VWR# 21899-094	0.00	7.51	7.51	2.50	5.64	3.13	1.88	4.38	6.89	0.00	0.00	9.39	48.85	
5407331	Degreaser gel engine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5407332	Cleaner Electric Motor KAR #65390-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5407334	Stripper / Remover For Paint, Carbon &	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Parts Washing Solvent	790.63	0.00	0.00	0.00	790.63	0.00	0.00	724.75	0.00	0.00	0.00	0.00	2306.01	
5407376	Isopropyl Alcohol (IPA) 99%	1810.00	1448.00	1810.00	1448.00	1810.00	1086.00	2172.00	1448.00	2172.00	1448.00	1810.00	1448.00	19910.00	
5516514	Bottle IPA high purity (4-1 gal/case)	117.92	163.78	111.37	137.57	150.67	157.23	104.82	176.88	104.82	98.27	85.16	78.61	1487.09	
5407470	Cleaner Zero Residue Instant Teck Spray	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5407938	Caviclean #2 Cleaning Solution Turco	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total lbs	2718.55	1620.93	1928.88	1588.90	2756.94	1246.36	2280.34	2354.01	2285.35	1549.55	1895.16	1536.01	23760.98	Total lbs
	Total tons	1.36	0.81	0.96	0.79	1.38	0.62	1.14	1.18	1.14	0.77	0.95	0.77	11.88	Total tons
Recovered															
VOCs	IPA in OWW (lbs)	74.40	346.50	71.30	1089.00	86.80	747.10	75.00	812.20	371.25	371.25	371.25	74.40	4490.45	
	recovered parts washer solvent (lbs)	751.10	0.00	0.00	0.00	751.10	0.00	0.00	688.51	0.00	0.00	0.00	0.00	2190.71	
	lbs	825.50	346.50	71.30	1089.00	837.90	747.10	75.00	1500.71	371.25	371.25	371.25	74.40	6681.16	Total lbs
	tons	0.41	0.17	0.04	0.54	0.42	0.37	0.04	0.75	0.19	0.19	0.19	0.04	3.34	Total tons
Unrecoverec	tons	0.95	0.64	0.93	0.25	0.96	0.25	1.10	0.43	0.96	0.59	0.76	0.73	8.54	Total cleaning solvent VOCs emitted

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OWW IPA			
Month	lbs/day	lbs/month	
Jan	2.4	74	
Feb		347	based on lb/day avg
Mar	2.3	71	
Apr	36.3	1089	
May	2.8	87	
Jun	24.1	747	
Jul	2.5	75	
Aug	26.2	812	
Sep		371	based on lb/day avg
Oct		371	based on lb/day avg
Nov		371	based on lb/day avg
Dec	2.4	74	
*Average:	12.4	4490	total lbs
		2.25	total tons

VOC's in wastes by month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
lbs	826	558	71	1306	838	926	191	1687	449	371	661	74	7957
tons	0.41	0.28	0.04	0.65	0.42	0.46	0.10	0.84	0.22	0.19	0.33	0.04	3.98

Source: N:/WWTP/Baseline/Permit + Testing.xls

Mixed Flammables (Labpack)			
Date Shipped	lbs	Avg lb/day	Avg lb/month
			0.00
Total lbs:	0		
lbs VOC:	0		0.00 tons

Parts Washer Solvent Waste (100% VOC)		
Date Shipped	gals	lbs
Jan	120	790.6
May	120	790.6
Aug	110	724.7
Total lbs:		2306.0
lbs VOC:	350	2306.0
estimated actual recovery		2190.7 lbs
(worst case 5% evaporation)		1.10 tons

(Thermal Fluids parts washer solvent: naptha)

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Wax Waste* Date Shipped	lbs	Avg lb/month
14-Feb	1126	512.50
15-Apr	1102	
6-Jun	950	
1-Jul	377	
24-Aug	991	
22-Sep	411	
21-Nov	1193	
Total lbs:	6150	

lbs VOC: 1156 (Waste Profile Number: 325054)
tons VOC 0.58
* Fab 1 Waste Wax has 18.6% VOC content
Fab 2 Waste Wax has 19.0% VOC content
Average VOC content is 18.8%

Partially Full Aerosols Date Shipped	lbs
4/15/2005	10
7/1/2005	45
11/22/2005	65
Total lbs.	120
tons	0.06

Total lbs VOC in waste shipments for 2004:

lbs		tons
7,957	or	3.98

Waste shipment data from
N:\Environmental\Hazardous Waste\2004\Waste 2004.mdb

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Date	IPA lbs/day
1/6/05	2.4
1/13/05	
1/20/05	
1/27/05	
2/3/05	
2/10/05	
2/17/05	
2/24/05	
3/3/05	2.3
3/10/05	
3/17/05	
3/24/05	
3/31/05	
4/7/05	36.3
4/14/05	
4/21/05	
4/28/05	
5/5/05	2.8
5/12/05	
5/19/05	
5/26/05	
6/2/05	
6/9/05	24.1
6/16/05	
6/23/05	
6/30/05	
7/7/05	2.5
7/13/05	
7/21/05	
7/28/05	
8/4/05	26.2
8/11/05	
8/18/05	
8/25/05	
9/1/05	
9/8/05	
9/15/05	
9/22/05	
9/29/05	
10/6/05	
10/13/05	
10/20/05	
10/27/05	
11/4/05	
11/10/05	
11/14/05	
11/22/05	
12/1/05	2.4
12/8/05	
12/15/05	
12/22/05	
12/29/05	
Average	12.4
max	**4,518**
min dectection limit, ppm	

2004

VOC units

Units of Item Purchased by Month		1	2	3	4	5	6	7	8	9	10	11	12	
Part No. SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total consumption
*	Spraypaint *	8	0	6	0	5	25	8	6	0	11	4	4	77
5407102	Sealant silicon clear 3 oz tube	0	0	0	1	2	0	0	0	0	1	0	0	4
5407103	Sealant Silicone White 10.3 OZ tube	0	0	2	0	1	2	0	0	0	2	0	0	7
5407104	Sealant Rubber Silicone RTV GE #W102 cart	0	0	0	1	0	0	0	0	0	0	0	0	1
5407105	Paste silicon P12 Warmeleitpaste	0	1	0	0	0	0	0	1	0	0	0	0	2
5407106	Silicon RTV high temp red mak-a-gasket	0	0	0	0	0	0	0	0	0	2	2	0	4
5407107	Silicone RTV High Temp Blue Mak-A-Gasket	0	0	0	0	2	2	0	3	0	2	2	0	11
5407108	Silicone RTV High Temp Clear MAK-A-Gasket	1	1	0	0	2	0	4	0	1	1	0	0	10
5407328	Cleaner Instant Contact #CRC-02016	2	0	2	0	0	0	0	0	0	2	3	0	9
5407330	Cleaner dust chaser spray VWR# 21899-094	3	12	20	3	20	10	9	10	7	17	7	7	125
5407331	Degreaser gel engine	0	0	2	0	0	0	0	0	0	0	0	0	2
5407332	Cleaner Electric Motor KAR #65390-2	0	0	0	0	2	0	0	0	0	0	0	0	2
5407334	Stripper / Remover For Paint, Carbon &	0	0	0	0	0	0	0	0	0	0	0	0	0
5407376	Isopropyl Alcohol (IPA) 99%	5	7	4	6	5	6	3	5	7	6	6	5	65
5407408	Lubricant Spray Molykote 321R Dow-Corning	0	0	0	0	0	0	0	0	0	0	0	0	0
5407431	Lubricant CRC 3-36 #03005	0	0	0	0	12	0	0	2	12	0	4	0	30
5407432	LUBRICANT Parker-O-Lube #884-4	0	0	0	0	0	0	0	0	0	0	0	0	0
5407433	Lubricant CRC 3-36 (Gallon Can)	1	0	0	0	0	0	1	0	0	0	0	2	4
5407434	GREASE ALVANIA EP 2 LITHIUM BASE	12	8	0	2	4	0	0	5	6	0	4	0	41
5407435	Lube Teflon #79417	0	0	0	0	1	0	0	0	0	3	0	0	4
5407436	Lubricant Teflon Dry #79418	0	0	0	0	0	0	0	0	0	0	0	0	0
5407439	Cement Neoprene Turntable Covering Carbo	0	0	0	0	0	0	0	0	0	0	0	0	0
5407466	Skyliquid Wax for Enya, HF-3511	0	0	0	0	0	0	0	0	0	0	0	0	0
5407470	Cleaner Zero Residue Instant Tech Spray	0	0	0	0	0	0	0	0	0	0	0	0	0
5407938	Caviclean #2 Cleaning Solution Turco	0	0	0	0	0	0	0	0	0	0	0	0	0
5407946	Anti-sieze High Temp Industrial, 1 lb	0	0	0	0	0	0	0	0	0	0	0	0	0
5407947	Lubricant Silicon	0	0	0	0	0	0	0	0	0	0	0	0	0
5407948	Grease Multi Purpose White	0	0	0	0	0	0	0	0	0	0	0	0	0
5407950	PAINT OSHA orange spray can	0	0	0	0	0	0	0	0	0	0	0	0	0
5407953	Vinnapas C305	0	0	0	0	0	0	0	0	1	0	0	0	1
5407955	Epoxy Valtron AD1230 4-1 GAL/CS Part A	0	0	0	1	0	0	0	0	0	0	0	0	1
5407956	Hardner AD1211-B Red Pigment	0	0	0	1	0	0	0	0	0	0	0	0	1
5407957	Epoxy STC Fast Cure Grey	0	0	0	0	0	0	0	0	0	0	0	0	0
5407963	Mold-Release Wiz F-57NC 1 Gallon	0	0	0	0	0	0	0	0	0	0	0	0	0
5407966	ADHESIVE 10ML blue thred	0	1	0	0	0	0	0	0	0	0	1	0	2
5407967	Adhesive Tixo K-10 10 Gm/Each	0	1	0	0	0	0	0	0	-1	0	0	0	0
5410534	Aerokroil loosens frozen metal parts	0	0	2	6	4	7	0	9	4	0	6	0	38
5410872	PAINT spray yellow	0	0	0	0	2	6	2	2	0	0	0	0	12
5413542	Skyliquid Wax for Enya, HF-4011	276	210	306	654	72	330	336	348	306	192	372	222	3624
5516514	Bottle IPA high purity (4-1 gal/case)	26	14	22	18	11	21	17	20	12	16	18	10	205
5522458	Wax Thin Skyliquid KN-25449 2ltr/btl	24	24	0	156	-78	0	0	0	0	0	0	6	132
5527433	Tisab II with CDTA	3	1	3	3	3	3	2	5	2	2	2	3	32
	Parts Washing Solvent	45	0	75	0	0	45	0	0	75	0	75	0	315
	3M Scotch-Grip HP Contact Adhesive 1357	0	0	0	0	0	0	0	0	0	0	0	0	0
10161	Microstrip 2001	2	2	2	2	2	2	2	2	2	2	2	3	25
10173	Skyliquid SB35464	0	0	0	0	0	0	0	0	0	0	0	0	0
10201	Gear Compound EP ISO 460	1	0	0	0	0	0	0	0	0	0	0	0	1
* this category contains part numbers 5406902-12														
Part No. SAP	Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total consumption
5406902	Paint Krylon White Enamel Glossy #1501	0	0	0	0	0	13	0	6	0	0	0	0	19
5406903	Paint Gray Primer 2X982 16oz.	2	0	3	0	2	6	5	0	0	4	2	2	26
5406904	Paint Supercoat 316L SS Aerosol Can	3	0	2	0	0	4	0	0	0	3	0	0	12
5406905	Varnish red insulating	0	0	0	0	0	0	0	0	0	0	0	0	0
5406906	Paint John Deere Green	0	0	0	0	0	0	0	0	0	0	0	0	0
5406907	Paint Chevrolet Orange	0	0	0	0	0	0	0	0	0	0	2	0	2
5406908	Paint Ford Red	0	0	1	0	1	0	0	0	0	0	0	0	2
5406909	Paint High Heat Black	2	0	0	0	0	2	1	0	0	0	0	0	5
5406910	Paint Chrysler Blue/ Napa	0	0	0	0	0	0	0	0	0	0	0	2	2
5406911	Paint Tan Industrial Enamel	0	0	0	0	0	0	0	0	0	0	0	0	0
5406912	Paint Glossy Black Spray Can #84000	1	0	0	0	2	0	2	0	0	4	0	0	9

437
438
4028

SCOEPA00023150

NOx pounds for 2000

Jan	1828.09
Feb	1934.33
Mar	1478.64
Apr	1080.42
May	1244.58
Jun	1227.56
Jul	804.26
Aug	1273.02
Sep	1025.70
Oct	1208.54
Nov	1323.89
Dec	586.02
*strip chart	526.33

Pounds NOx: 15541.38 Tons Nox: 7.77

Data logger up time:

Total days up:	356
Days up, but data unrecovered:	9
	0
% recovered data:	100%

*On January 1-8, March 4, and June 14 the data logger wasn't up; however, the data was recovered from strip charts.

Estimating total NOx pounds:

15541.38 Tons Nox 7.77

SCOEPA00023151

Air Emissions Calculations for 2001

Emissions from burning natural gas

Natural gas usage:	
Month	10^6 cf
Jan	20.71
Feb	18.91
Mar	18.17
Apr	17.93
May	13.86
Jun	12.86
Jul	12.89
Aug	12.23
Sep	11.78
Oct	13.83
Nov	15.4
Dec	18.83
Total (cf/year):	187.40

yellow shading indicates user input information
From montly natural gas bills → from Tom McCue

AP-42 emission factors, Vol. I, Table 1.4-1:			
Particulate	3	lb/10^6 cf	(avg of 1 to 5 lb/10^6 cf)
CO	35	lb/10^6 cf	
NOx	140	lb/10^6 cf	
SOx	0.6	lb/10^6 cf	
VOCs	5.8	lb/10^6 cf	(nonmethane+methane)

Assuming all fuel fired equipment behaves according to AP-42,
we can calculate using the annual natural gas usage:

	lb/year	tons/year
Particulate	562	0.28
CO	6559	3.3
NOx	26236	13
SOx	112	0.06
VOCs	1087	0.54

::

SCOEPA00023152

Analytical data from North Creek Analytical 2001
(reports from Dianne Mullan/Facilities Lab)

OWW IPA		
Month, 2001	Detection Limit	Result (ppm)
Jan	1.0	< 1
Feb	1.0	5.0
Mar	1.0	5.0
Apr	1.0	1.0
May	1.0	2.0
Jun	1.0	6.0
Jul	1.0	<1.0
Aug	1.0	<1.0
Sep	1.0	3.0
Oct	1.0	<1.0
Nov	1.0	<1.0
Dec	1.0	<1.0
*Average:		3.7

	Million Gallons	
Month	Process WW Flow	OWW Flow
Jan	32.736	25.565
Feb	29.26	19.366
Mar	31.465	19.959
Apr	28.5	19.18
May	26.939	17.956
Jun	27.42	17.507
Jul	27.807	17.395
Aug	28.303	18.608
Sep	25.575	22.565
Oct	28.83	18.225
Nov	27.54	17.185
Dec	27.807	16.645
Total	342.182	230.156

OWW = Organic Waste Water

Process WW = Process Waste Water Flow, Average, (from DMRs)
aka (Weak Acid Drain, or WAD + Concentrated Acid Drain, or CAD)
OWW flows from Facilities (L:\RODI\CCR\"totals".xls)

ppm = mg/l
ND = Not Detected
*Did not include NDs in average.
POTW Flow: (OWW system)
230156000 gallons for the year
19179666.67 per month, assuming flow is consistent

River Flow: (CE)
342182000 gallons for the year
28515167 per month, assuming flow is consistent

calculating yearly amount of IPA to POTW:

$$\frac{3.7 \text{ gal IPA}}{1000000 \text{ gal water}} \times \frac{230156000 \text{ gal water}}{\text{year}} \times \frac{6.59 \text{ lb IPA}}{\text{gal IPA}} = \frac{5561 \text{ lb IPA}}{\text{year}}$$

5561 lb IPA / year to waste water

::

Total lb VOC in waste water for 2001: 5561 or 2.8 tons

SCOEPA00023153

All input data (yellow shaded areas) received from Petra Hoy in 2001 Waste Shipment Information.
L:\Hazardous Waste\2001\list of wastes "for VOC report".xls

Mixed Alcohols Waste (90% VOC)			
Date Shipped	lbs	Avg lb/day	Avg lb/month
			50.00
8-Feb	600	0.01	
Total lbs:	600		

lbs VOC: 540 (Waste Profile Number: 321346)

Parts Washer Solvent Waste (100% VOC)			
Date Shipped	lbs	Avg lb/day	Avg lb/month
18-Jan	80.4	0.002	78.73
9-Feb	201	9.14	
4-May	274.7	3.27	
14-Jun	187.6	4.58	
18-Oct	201	1.60	
Total lbs:	944.7		

lbs VOC: 945 (Safety-Kleen Premium Gold Solvent)

Wax Waste (from Fab 2 - Enya) 20% / 60% VOC*			
Date Shipped	lbs	Avg lb/day	Avg lb/month
			399.92
11-Jan	626	0.02	
8-Feb	593	21.18	
15-Mar	620	17.71	
12-Apr	200	7.14	
10-May	419	14.96	
11-Jun	231	7.22	
27-Jun	423	26.44	
31-Jul	225	6.62	
17-Sep	476	9.92	
2-Oct	213	14.20	
6-Nov	400	11.43	
7-Dec	373	0.94	
Total lbs:	4799		

lbs VOC: 2144 (Waste Profile Number: 325054) Ronnie

* As of March 2000 the Mixed Alcohol and Wax Waste profiles are combined
There by increasing the % VOC in the Wax Waste to 60%

Total lbs VOC in waste shipments for 2001:	3629	or	1.8 tons	
	1485	or	0.7 tons	(not including Wax Waste)
	540	or	0.3 tons	(cleaning solvent VOCs only, not including Safety-Kleen)

SCOEPA00023154

Emergency generator information from Mike Iannantuano

Emissions from burning diesel fuel in emergency generators, other internal combustion engine

AP-42 emission factors, Vol. I, Table 3.4-1 (as referenced on Page 3 of ACDP Application Review Report Attachment):

	g/hphr
Particulate	0.24
CO	2.4
NOx	11
SOx	1.1
VOCs	0.33

Values used in calculating emissions:

2.71	test usage, in hr
0	shutdown usage, in hr
400	kW rated power (Generator #1)
536.4	hp, converted using 1.341 hp = 1 kW
0.25	typical load factor (power used/power rating)

10.78	test usage, in hr
0	shutdown usage, in hr
1000	kW rated power (Generator #2 and Generator #3)
1341	hp, converted using 1.341 hp = 1 kW
0.5	typical load factor (power used/power rating)

The equation given by AP-42 is: hr*hp*load factor*emission factor

This yeilds the following emission estimates:

	lb/year	tons/year
Particulate	4	0.002
CO	40	0.02
NOx	184	0.09
SOx	18	0.01
VOCs	6	0.00

Notes: Load factors based on conservative estimates of shutdown loads and preventative maintenance test loads.

Calculation of gallons of L/S burned:

lbs of SOx (assume SO2) 18 x $\frac{32.1 \text{ MW sulfur}}{64.1 \text{ MW SO2}}$ = 9.2 lbs of sulfur

L/S diesel contains <0.05% sulfur $\frac{9.2}{0.0005}$ = 18438 lbs diesel oi 2571 gallons diese

SCOEPA00023155

SOx emissions may be better estimated using purchased fuel information and sulfur balance.
Calculating for the fuel purchased in 2001 (L/S Diesel):

Given:	1546 gal L/S Diesel delivered;		
This fuel contains:	maximum of	0.05 WT% sulfur;	
0.86 sp.gr.			
8.34 lbs/galH2O			
7.1724 lbs/gal diesel		11088.5 lbs diesel	
0.0035862 lbs sulfur/gal diesel		5.54427 lbs sulfur	

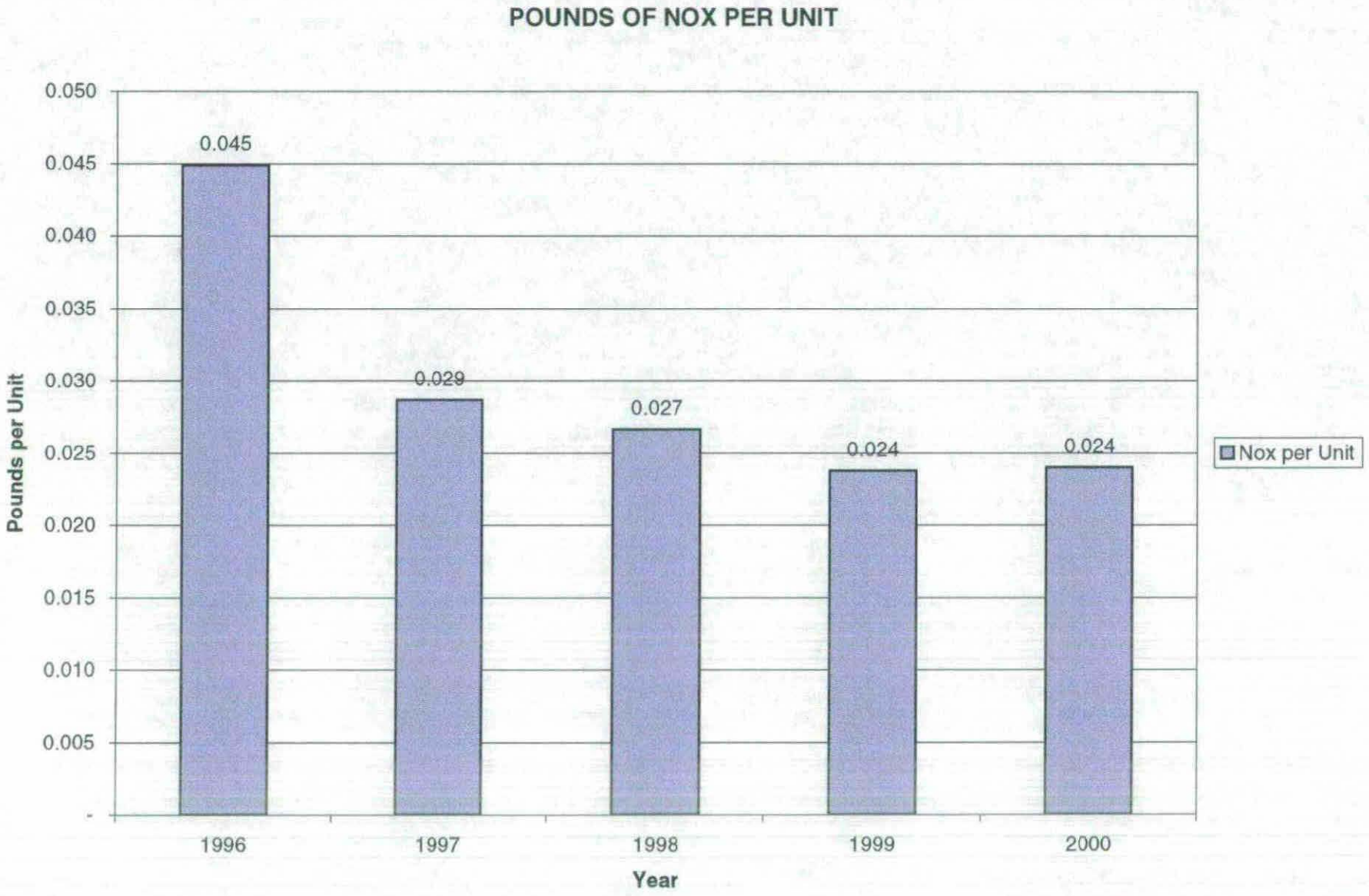
Assuming all the sulfur goes to SOx

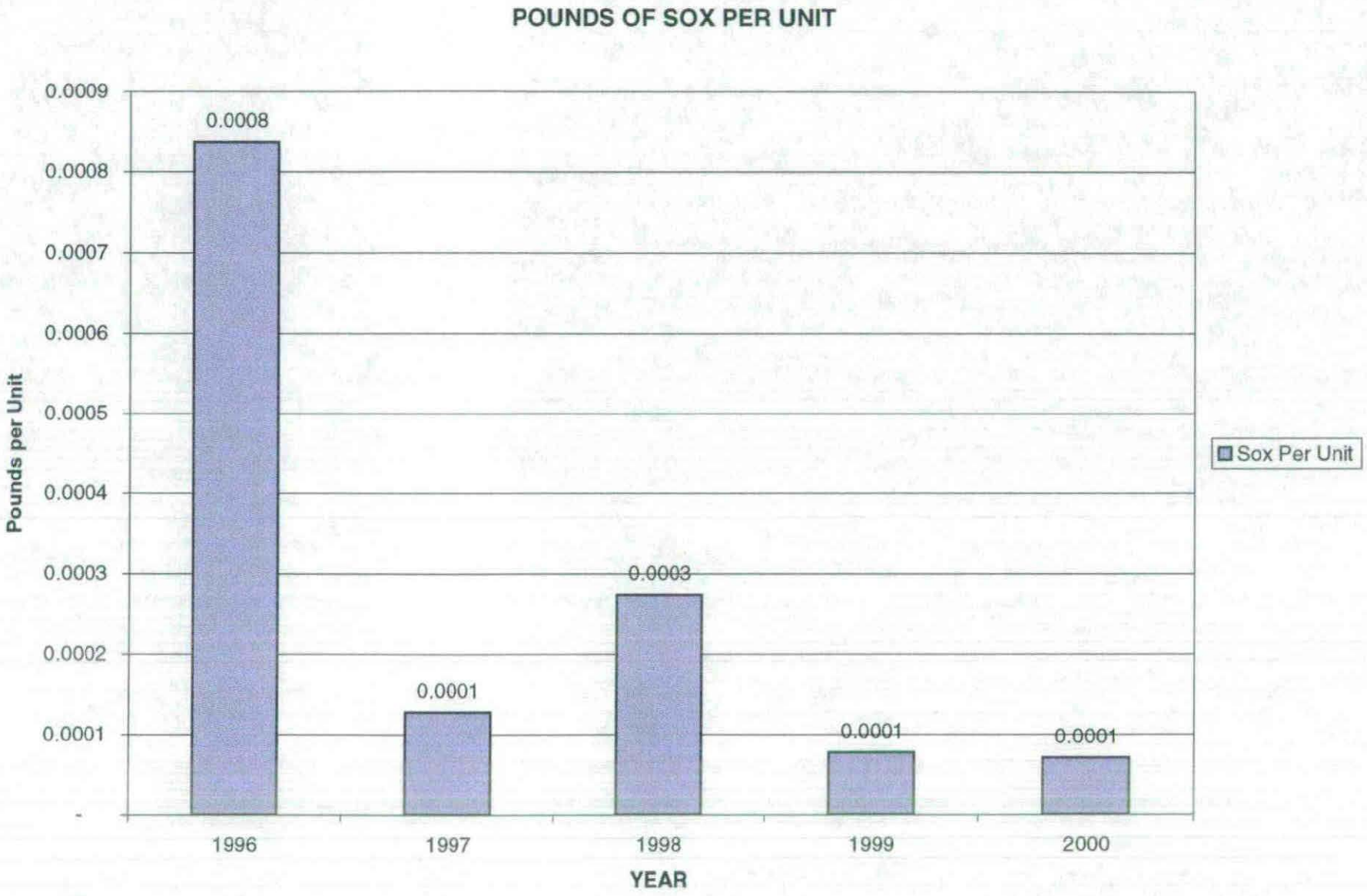
Assuming SOx is:	0.00% SO	then	64.1 =MW SOx
	100.00% SO2		

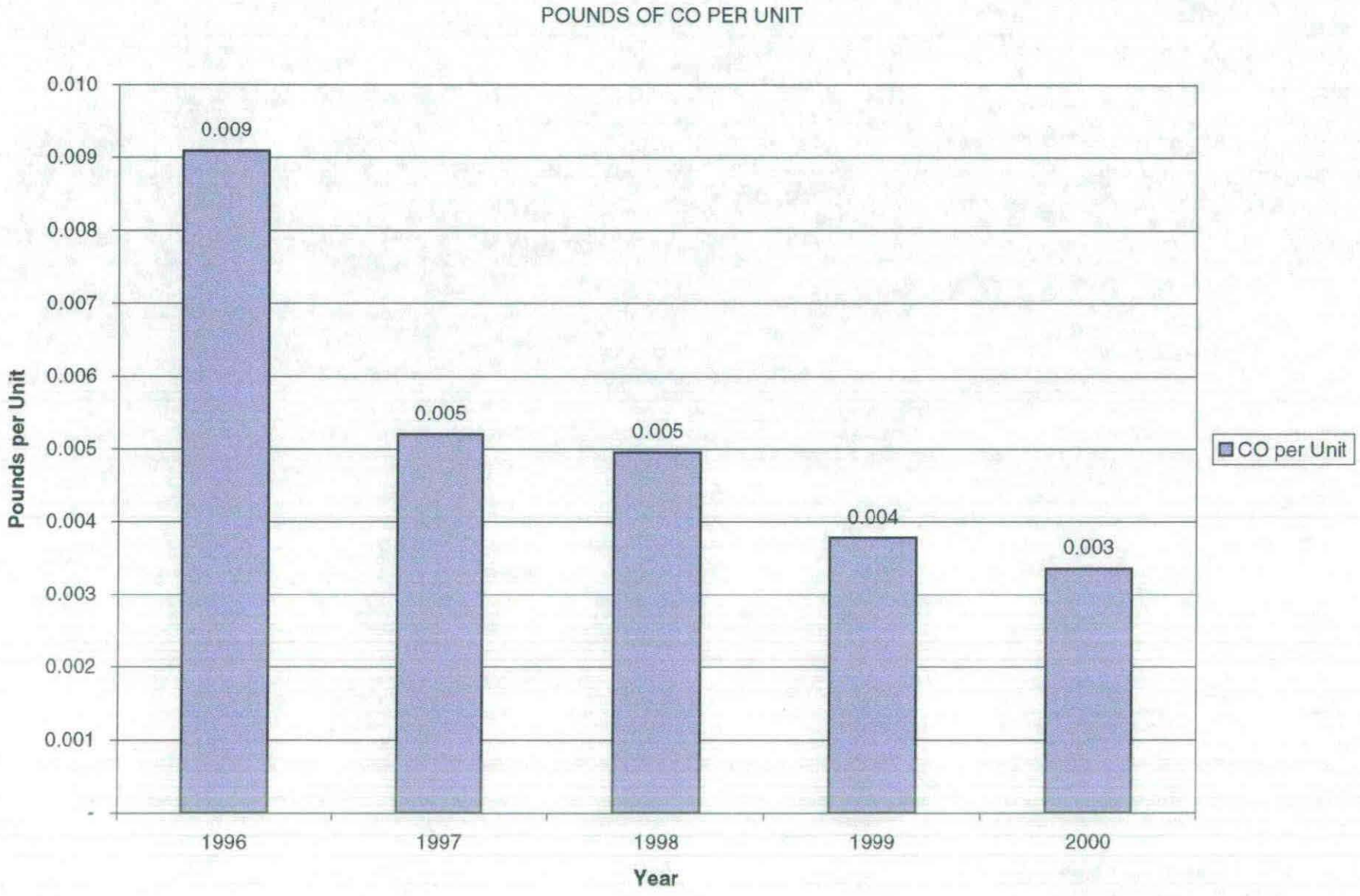
then from the diesel fuel the SOx emissions were:

	32.1 MW sulfur, lbs/lbmol	
gives	0.1727185 lbmol sulfur	
which is	0.1727185 lbmol SOx	
and equals	11.071259 lbs SOx	emitted by the fuel
or	0.0055356 tons SOx	

SCOEPA00023156


POUNDS OF NOX PER UNIT
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
-
Pounds per Unit
0.045
0.029
0.027
0.024
0.024
1996
1997
1998
1999
2000
Year
Nox per Unit


POUNDS OF SOX PER UNIT
Pounds per Unit
0.0009
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
-
0.0008
0.0001
0.0003
0.0001
0.0001
1996
1997
1998
1999
2000
YEAR
Sox Per Unit


POUNDS OF CO PER UNIT
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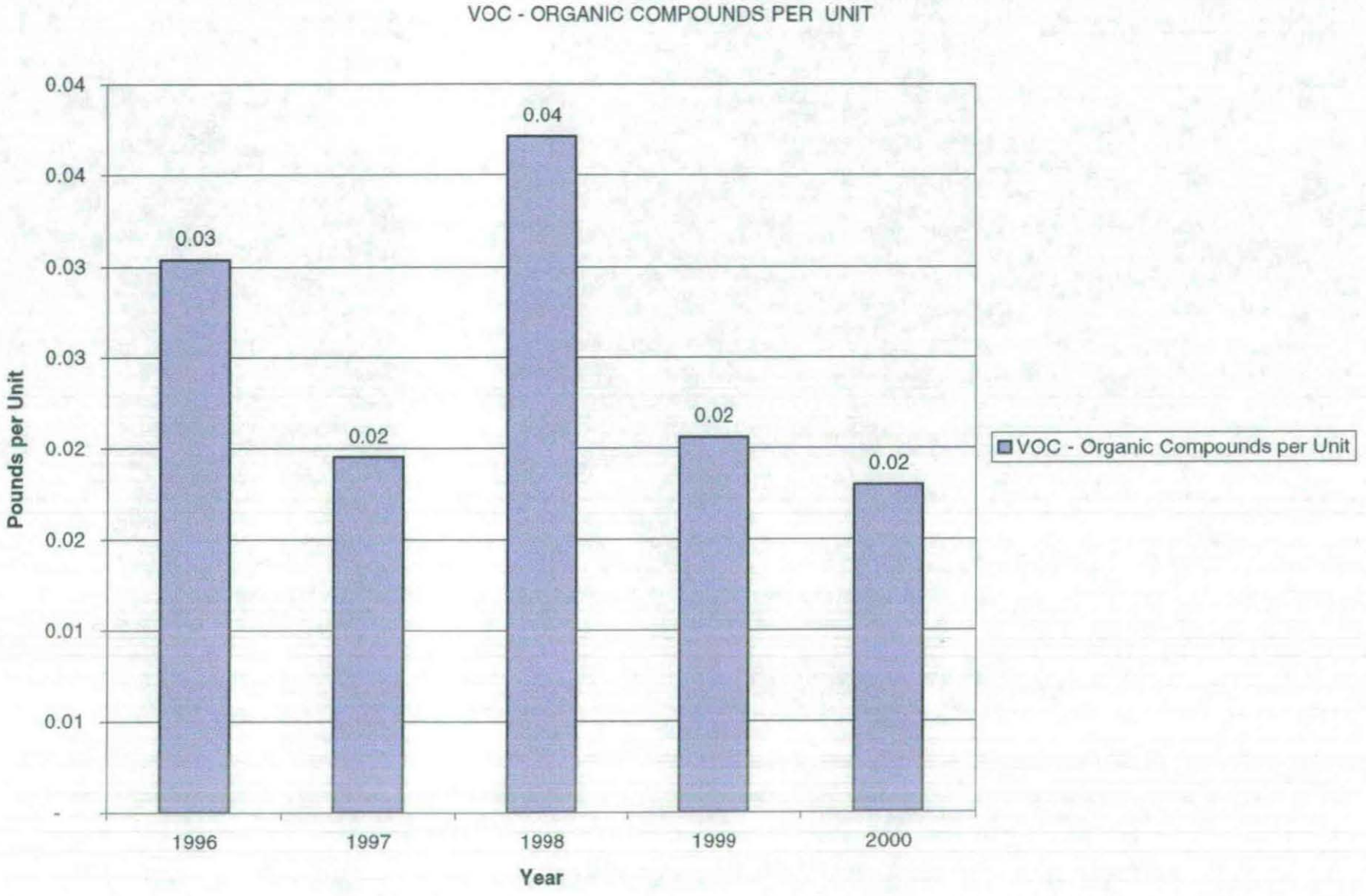
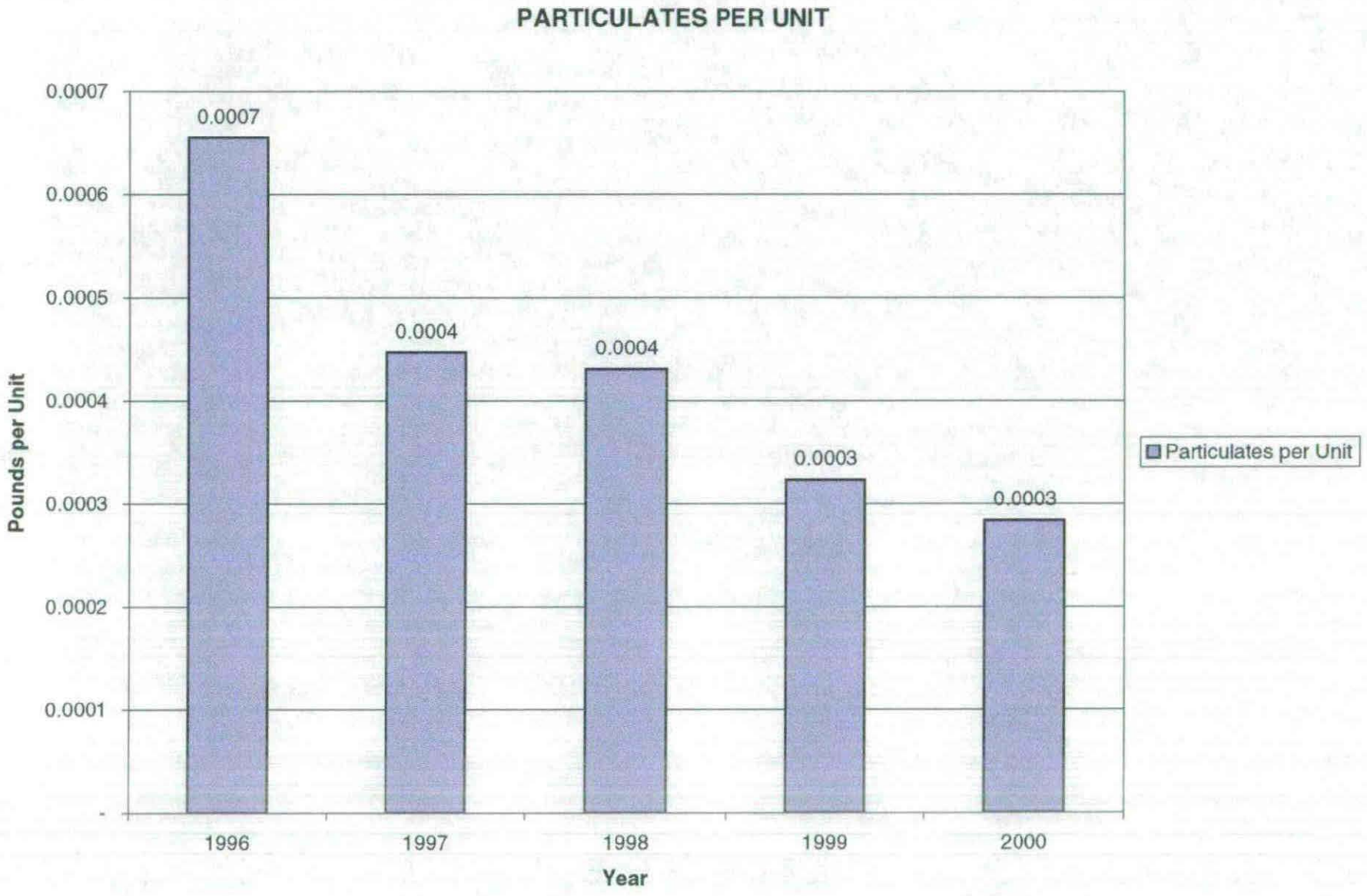
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
-
Pounds per Unit
0.009
0.005
0.005
0.004
0.003
1996
1997
1998
1999
2000
Year
CO per Unit


VOC - ORGANIC COMPOUNDS PER UNIT
0.04
0.04
0.03
0.03
0.02
0.02
0.01
0.01
-
Pounds per Unit
0.03
0.02
0.04
0.02
0.02
1996
1997
1998
1999
2000
Year
VOC - Organic Compounds per Unit


PARTICULATES PER UNIT
Pounds per Unit
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
-
0.0007
0.0004
0.0004
0.0003
0.0003
1996
1997
1998
1999
2000
Year
Particulates per Unit

Wacker Siltronic Corporation
Annual Air Emissions Report for 1995
Revision 1

Monthly and Annual Usage / Emission Summary

	Nat.Gas (mil. cf)	Deisel (avg gal)	Kerosene (gal)	VOC Cleaning Solvent used (tons)	VOC Waste Solvent * (avg lbs)	VOC Solvent Emissions (tons)
January	10.4	530		2.5	520	2.1
February	9.9	530		2.0	520	1.7
March	8.8	530		2.7	520	2.4
April	10.1	529		1.6	520	1.4
May	8.4	529		1.4	520	1.2
June	7.7	529		1.8	520	1.6
July	7.7	529		1.4	520	1.2
August	7.6	529		2.5	520	2.2
September	7.7	529		1.3	520	1.1
October	8.3	529		1.8	520	1.5
November	10.3	529		1.4	520	1.2
December	18.3	529	32.6	1.8	520	1.6
TOTALS	115.2	6351	32.6	22.4	6242	19.3

* Number includes VOC in hazardous waste and waste water. Hazardous waste quantities taken fro shipment records. VOC quantities in waste water calculated by material balance.

Criteria Pollutant Annual Emissions

	lbs / year	
	Nat. Gas	Deisel
Particulate	346	150
CO	4032	4540
NOx	16128	21024
SOx	69	1391
VOC	668	N/A

95PERMIT. WRV

Wacker Siltronic Corporation
Annual Air Emissions Report for 1995
Revision 1

Annual Report Items

Annual wafer manufacturing NOx emission:	3.2 tons
Annual amount of VOCs emitted:	20.2 tons
Annual amount of VOC used:	23.6 tons
Emergency generator hours of operation:	78 hrs
Excess emissions per OAR 340-28-1440:	None

Major maintenance performed on air pollution control equipment:

1. Fan motor bearing replacement.
2. Fan bearing replacement.
3. Replacement of 10 foot section of intake duct.
4. Temporary relocation of EPI Quartz cleaning scrubber during construction activities (extended intake duct 20 feet).

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Siltronic Corporation Site ID 93450

ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	11	1	TO	2004	11	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Process Waste Water Flow	SAMPLE MEASUREMENT	3,305	3,638	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--			totalizing recorder	
BOD	SAMPLE MEASUREMENT	10.1	16.5	Kg/day	--	3.3	5.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	154	342		--	15	30				
TSS	SAMPLE MEASUREMENT	4.5	6.4	Kg/day	--	1.4	1.9	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	236	695		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			Kg/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.05	0.12		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.004	<0.004	Kg/day	--	<0.001	<0.001	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	23.1	25.7	Kg/day	--	7.2	7.7	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	178	365		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.4	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	--	--		--	10	15				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Siltronic Corp. by:
J Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 12 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

ER 080

SCOEPA00023164

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Siltronic Corporation Site ID 93450

ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2004	11	1	TO	2004	11	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	Kg/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
Turbidity	SAMPLE MEASUREMENT					4.1	7.5	NTC		6/1	Grab
	PERMIT REQUIREMENT									One sample every 4 hours	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Siltronic Corp. by:

J Claxton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	04	12	9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023165

PERMITTEE NAME/ADDRESS (Include Facility Name/Location (if different))

NAME: Siltronic Corporation Site ID 93450

ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) 101128 PERMIT NUMBER

(17-18) Outfall 002 DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	11	1	TO	2004	11	30
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	401	738	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.3	mg/l		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	10	15				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 12 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023166

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Siltronic Corporation Site ID 93450
ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(3-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	11	1	TO	2004	11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	3,706	4,210	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	76.3	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	6.26	7.25	7.90			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Siltronic Corp. by:
J Clayton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	04	12	9
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023167

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER: 081.JWC

2004-December-10

November 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the November 2004 Industrial Discharge Report for Siltronic Corporation Municipal Discharge permit 469-01. Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
POTW-IDR
Special Account Meter Report Document

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: December 15, 2004

SAMPLING PERIOD: November 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	FOXOBORO	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: J Clayton Date: 12/10/2004

Document1

4640175004
SUSC SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

11/30/2004

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	705,396	(100s of GALLONS)
CURRENT READING	109367	876,851	(100s of GALLONS)
CONSUMPTION	0	171,455	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,714,550	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,714,550	* 10 GAL / 7.48 GAL/CF =	2,292,179 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,292,179 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	913,755	(10s of GALLONS)
CURRENT READING	960,697	(10s of GALLONS)
CONSUMPTION	46,942	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	46,942	* 10 GAL / 7.48 GAL/CF=	62,757 CF

This meter reading was reported by: C. Justin Darr on 12/07/04
C. Justin Darr date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
Portland, Oregon 97203-5452

SCOEPA00023170

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perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Department of State Police
Office of the State Fire Marshal
Fee Review Section
4760 Portland Road NE
Salem, OR 97305-1760

ER: 079.JWC

2004-11-30

Fee Review of the Notice of Oregon Hazardous Substance Possession Fee

Dear Sir,

In reviewing the tax Year 04 fee notice, we have found an error in our 2003 Fire Marshal Report.

Company name	Siltronic Corporation
Facility ID number	005268
Address	7200 NW Front Ave, Portland, OR 97210-3676
Name of hazardous sub-stance listed in fee	NITROGEN
Amount of Fee assessed	$1275.00
Contact and telephone	Jim Claxton 503-219-7313
Basis for review	In process of reviewing the fee notice, it was found that an error was made in the Siltronic 2003 Fire Marshal Report that resulted in the **wrong** hazardous material being listed on the fee notice.
Correction to fee notice	Hydrogen Chloride Max Amount Code 40

Siltronic Corporation uses anhydrous hydrogen chloride in the process to make silicon wafers for the electronic industry. In 2003, 3147 cylinders anhydrous HCl were used. Each cylinder holds 60 lbs. of anhydrous HCl, which is equal to 641.5 ft^3 of anhydrous HCl at 1-atm. & 25°C. A 12 lbs. "heel" of anhydrous HCl remains in each cylinder after use and is returned to the supplier. The maximum on hand is about 250 cylinders including those in storage and in use. The corrections to the 2003 Fire Marshal Report are:

Sections	Code	Calculations
Avg Amount Code	**21**	3147 cyl x 641.5 ft^3/cyl / 365 days = 5,500 ft^3/day
Max Amt Code	**40**	250 cyl x 641.5 ft^3/cyl = 160,000 ft^3
Amt In Code	**50**	3147 cyl x 641.5 ft^3/cyl = 2,020,000 ft^3/yr
Amt Out Code	**41**	12 lbs/cyl x 3147 cyl = 37,764 lbs or the equivalent of 629.4 cyl at 60 lbs each. 629.4 cyl x 641.5 ft/cyl = 404,000 ft^3/yr

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perfect silicon solutions

At the advice of your hotline staff, Siltronic Corporation will pay the $1,275.00 fee requested on the Notice. If you require additional information, please contact me.

Best regards,

Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Cc: Brian Bailey
OR Haz. Subst. Possession Fee file

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perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER:075 JWC

2004-November-12

Discharge Monitoring Report for October 2004

Dear Dr. Zais:

Enclosed is the October 2004 Discharge Monitoring Report for Wacker Siltronic Corporation NPDES permit number 101128, File Number 93450 and the results for the Split sample taken Oc tober 19, 2004

If you have any questions, please contact me.

Best regards,

Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
Discharge Monitoring Report
Split Sample Results (Siltronic and Coffey Labs reports)
Chain of Custody

cc: Tom Rothschild
DMR File

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Siltronic Corporation Site ID 93450
ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(3-16) (17-19)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	10	1	TO	2004	10	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	(54-61) AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	3,329	3,691	M^3/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	12.5	19.1	Kg/day	--	3.9	6.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	154	342		--	15	30				
TSS	SAMPLE MEASUREMENT	7.0	9.6	Kg/day	--	2.2	3.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	236	695		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			Kg/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.05	0.12		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.004	<0.004	Kg/day	--	<0.001	<0.001	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	25.2	32.6	Kg/day	--	7.8	10.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	178	365		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	10	15				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Siltronic Corp. by:
J Clayton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 04 MO 11 DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER 075

SCOEPA00023174

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Siltronic Corporation Site ID 93450

ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	10	1	TO	2004	10	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	Kg/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
Turbidity	SAMPLE MEASUREMENT					4.0	6.3	NTC		6/1	Grab
	PERMIT REQUIREMENT									One sample every 4 hours.	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Siltronic Corp. by

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	04	11	11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023175

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Siltronic Corporation Site ID 93450
ADDRESS 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(5-16) (17-19)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	10	1	TO	2004	10	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	395	670	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	10	15				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to additional imprisonment of between 6 months and 5 years.)

Siltronic Corp. by:
J Claston
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 11 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023176

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Siltronic Corporation Site ID 93450

ADDRESS 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

FROM YEAR	MO	DAY	TO YEAR	MO	DAY
2004	10	1	2004	10	31
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	3,724	4,198	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	75.9	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	6.12	7.35	8.06			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Siltronic Corp. by:

J. Claxton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	04	11	11
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023177

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Inter-Laboratory Split Comparison

DEQ Case Number: _____

Source Name: Siltronic Corporation
Contact Person: Thomas J. Rothschild
Address: 7200 N.W. Front Avenue
Collected By: Thomas J. Rothschild

Sample Date: 19 October 2004
Phone: 503-243-2020

Region/Division: _____

Analysis ♠	FIELD MEASUREMENTS♣			SOURCE SAMPLE RESULTS					DEQ LAB RESULTS				
	Sample A	Sample B	Sample C	Sample A	Sample B	Sample C	Sample D	Date/Time Analysis set up	Sample A	Sample B	Sample C	Sample D	Date/Time Analysis set up
BOD(1)				6.0 mg/L									
TSS				1.4 mg/L									
F⁻				7.49 mg/L									
Total(1) PO4				< 0.05 mg/L									
Total(1) Cr				< 0.01 mg/L									

Sample	Sample point description ♠ (ie. Effluent comp.).	Container number	
		SOURCE	DEQ ♠
A		Combined Effluent	
B			
C			
D			

Fill in your split sample results and mail to:

DEQ Lab
1712 SW 11th Ave.
Portland, OR 97201
Attn: QA Chemist

Shaded area for DEQ use.
♣DEQ sampler enter your field measurements, if taken; indicate whether they are estimates.
♠DEQ sampler is responsible for completing this column.

Need assistance with this form? Contact the QA chemist at (503) 229-5983.

(1) Coffey Laboratories, Incorporated.

SCOEPA00023178

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 10-19-04 Sample Date: ~~10-19-04~~ 10-21-04 Analyst: DI

Slope: -56.5 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A4113 Date Opened: 10/21/04

10.0 mg/L: Lot #: A4145 Date Opened: 10/14/04

Data:

Sample	Fluoride, mg/L
FAB-1 CE	
FAB-2 CE	7.49

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 231000 8

	FAB-1 CE	FAB-2 CE	
After Spike Concentration:	mg/L	9.32 mg/L	mg/L
Recovery:	%	91.5 %	%

Comments: _____

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 09 Mar 2004 Revised

N:ENVIRONMENTAL\FACLAB\WWTP\BENCH\FLOURIDEB.doc

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 10-19-04 Oven Temp: 104 C Analyst: DI

Date In: 10-21-04 Time In/Out: 1315 / 0945 (10/22/04)

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0876	0.0876	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0885	0.0879	1.2
3	CE FAB-2	500	0.0892	0.0884	1.6
				Average CE FAB-2 TSS	1.4
	OWW				
	OWW				
				Average OWW TSS	
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

SCOEPA00023180

RECEIVED NOV 1 1 2004
398

ORELAP 100028

Report Date: November 11, 2004
Job Number: A41019AY
PO Number: 4500075102
Project No: 104-106
Project Name: DEQ Split

Tom Rothschild
Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 10/19/04 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A41019AY-1	04-104-CE-C	Waste Water	10/19/04	1330
A41019AY-2	04-105-CE-G	Waste Water	10/19/04	1330
A41019AY-3	04-106-MV-3-G	Waste Water	10/19/04	1400

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

After consulting with the analyst, detection limits were raised due to poor surrogate recoveries.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

After consulting with the analyst, detection limits were raised due to poor surrogate recoveries.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

John A. Hield

Technical Services

SCOEPA00023181

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A41019AY
Page Number: 2 of 8

Lab Sample ID: A41019AY-1
Field ID: 04-104-CE-C
Date/Time: 10/19/04 1330
Matrix: Waste Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Biochemical Oxygen Demand	EPA 405.1	3.	6.	mg/L
*Total Phosphate	SM 4500-P-B2D	0.05	ND	mg/L
Chromium	EPA 218.2	0.001	ND	mg/L

ND means none detected at or above the detection limit listed.
*The analysis is not covered under ORELAP scope of accreditation.

SCOEPA00023182

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A41019AY
Page Number: 3 of 8

Lab Sample ID: A41019AY-2
Field ID: 04-105-CE-G
Date/Time: 10/19/04 1330
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 10/20/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	30.
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	ND
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	10.
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023183

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A41019AY

Lab Sample ID: A41019AY-2
Field ID: 04-105-CE-G
Date/Time: 10/19/04 1330
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 10/20/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
1,1-Dichloropropene	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	ND
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023184

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A41019AY
Page Number: 5 of 8

Lab Sample ID: A41019AY-2
Field ID: 04-105-CE-G
Date/Time: 10/19/04 1330
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 10/20/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	5.	ND	ND
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
Total Xylenes	10.	ND	ND
Dibromofluoromethane (Surr.)	---	---	118.%
1,2-Dichloroethane-d4 (Surr.)	---	---	117.%
Toluene-d8 (Surr.)	---	---	88.%
4-Bromofluorobenzene (Surr.)	---	---	101.%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023185

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A41019AY

Lab Sample ID: A41019AY-2
Field ID: 04-105-CE-G
Date/Time: 10/19/04 1330
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: EPA 8270; Semivolatile Organics by GC/MS.
Analysis Date: 10/28/04
Analyst: JB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acenaphthene	18.	ND	ND
Acenaphthylene	18.	ND	ND
Anthracene	18.	ND	ND
Azobenzene	5.1	ND	ND
1,2-Diphenylhydrazine	5.1	ND	ND
Benzo(a)anthracene	18.	ND	ND
Benzo(a)pyrene	18.	ND	ND
Benzo(b)fluoranthene	18.	ND	ND
Benzo(g,h,i)perylene	18.	ND	ND
Benzo(k)fluoranthene	18.	ND	ND
bis(2-Chloroethoxy)methane	18.	ND	ND
bis(2-Chloroethyl)ether	18.	ND	ND
bis(2-Chloroisopropyl)ether	18.	ND	ND
Bis(2-ethylhexyl)phthalate	18.	ND	ND
4-Bromophenyl phenyl ether	18.	ND	ND
Butyl benzyl phthalate	18.	ND	ND
4-Chloro-3-methylphenol	18.	ND	ND
2-Chloronaphthalene	18.	ND	ND
2-Chlorophenol	18.	ND	ND
4-Chlorophenyl phenyl ether	18.	ND	ND
Chrysene	18.	ND	ND
Di-n-butylphthalate	18.	ND	ND
Di-n-octylphthalate	18.	ND	ND
Dibenzo(a,h)anthracene	18.	ND	ND
1,2-Dichlorobenzene	18.	ND	ND
1,4-Dichlorobenzene	18.	ND	ND
1,3-Dichlorobenzene	18.	ND	ND
2,4-Dichlorophenol	18.	ND	ND
Diethyl phthalate	18.	ND	ND
2,4-Dimethylphenol	18.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023186

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A41019AY

Lab Sample ID: A41019AY-2
Field ID: 04-105-CE-G
Date/Time: 10/19/04 1330
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: EPA 8270; Semivolatile Organics by GC/MS.
Analysis Date: 10/28/04
Analyst: JB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Dimethylphthalate	18.	ND	ND
2,4-Dinitrophenol	18.	ND	ND
2,4-Dinitrotoluene	18.	ND	ND
2,6-Dinitrotoluene	18.	ND	ND
Fluoranthene	18.	ND	ND
Fluorene	18.	ND	ND
Hexachlorobenzene	18.	ND	ND
Hexachlorobutadiene	18.	ND	ND
Hexachloroethane	18.	ND	ND
Indeno(1,2,3-cd)pyrene	18.	ND	ND
Isophorone	18.	ND	ND
2-Methyl-4,6-dinitrophenol	18.	ND	ND
N-Nitrosodi-n-propylamine	18.	ND	ND
Naphthalene	18.	ND	ND
Nitrobenzene	18.	ND	ND
4-Nitrophenol	18.	ND	ND
2-Nitrophenol	18.	ND	ND
Pentachlorophenol	18.	ND	ND
Phenanthrene	18.	ND	ND
Phenol	18.	ND	ND
Pyrene	18.	ND	ND
1,2,4-Trichlorobenzene	18.	ND	ND
2,4,6-Trichlorophenol	18.	ND	ND
2-Fluorophenol (Surr.)	---	---	14.%
Phenol-d6 (Surr.)	---	---	8.%
Nitrobenzene-d5 (Surr.)	---	---	29.%
2-Fluorobiphenyl (Surr.)	---	---	31.%
2,4,6-Tribromophenol (Surr.)	---	---	40.%
Terphenyl-d14 (Surr.)	---	---	42.%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023187

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A41019AY
Page Number: 8 of 8

Lab Sample ID: A41019AY-3
Field ID: 04-106-MV-3-G
Date/Time: 10/19/04 1400
Matrix: Waste Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
*Total Phosphate	SM 4500-P-B2D	0.05	ND	mg/L

ND means none detected at or above the detection limit listed.
*The analysis is not covered under ORELAP scope of accreditation.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Nov 11 04 01:29p

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Siltronic
Mailing Address: 7200 N W Front Ave
Portland, Oregon
Phone: (503) 219-7274 FAX: (503) 417-4141

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 104~106
Project Name: DEQ SPLIT
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: Di

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ___ of ___
Job Number:
Custabbr: NEW
VISA M/C Cardholder:
Card #: Exp:
Cash / Check / CC $ #
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc	ID		Collection Date	Collection Time	Media	Analysis Requested	Test Profile
04-104-CE-C				10/19/04	1330	waste-	BOD, Cr(T), Total Phosphate	
04-105-CE-g				10/19/04	1330	water	8260, 8270 1-2 Diphenylhydrazine	
04-106-MV-3-g				10/19/04	1400		Total Phosphate	

Sampled By: Tom Rothschild, Elliot Zais (DEQ)
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 10/19/04

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Thomas J. Rothschild	10/19/04	1400	[signature]	10-19-04	1400
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER: 069.JWC

2004-October-13

September 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the September 2004 Industrial Discharge Report for Siltronic Corporation Municipal Discharge permit 469-001.

TSS was a problem in September. A sample taken 9/30/04 measured 808 mg/L. A re-sample taken 10/1/04 measured 517.5 mg/L. The WWTP staff found that there was a very small hole in the filter press cloth. After the cloth was replaced, samples taken 10/5 and 10/7 and the TSS were found to be 83.5 mg/L and 86.0 mg/L, respectively.

Attached is a report on the Upset to the plant October 2, 2004, due to an electrical power outage.

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton

Environmental Engineer

Enclosure:
POTW-IDR Quarterly Report
Power Outage Report for October 2, 2004
Lab Reports and Bench Sheets
Chain of Custody
Special Account Meter Report Document

cc: Tom Rothschild
POTW-IDR File

4640175004
SUSC SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

9/30/2004

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	320,147	(100s of GALLONS)
CURRENT READING	109367	526,261	(100s of GALLONS)
CONSUMPTION	0	206,114	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	2,061,140	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	2,061,140	* 10 GAL / 7.48 GAL/CF =	2,755,535	CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,755,535	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	777,799	(10s of GALLONS)
CURRENT READING	855,145	(10s of GALLONS)
CONSUMPTION	77,346	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	77,346	* 10 GAL / 7.48 GAL/CF=	103,404	CF

This meter reading was reported by: C. Justin Darr on 10/12/04
C. Justin Darr — date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023191

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: October 15,2004

SAMPLING PERIOD: Quarterly
July-September 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	SM-4508H	SU	0.1	5.0 - 11.5	N/A	No excursions
TTOs (Volatiles)	EPA 8260	<0.01 mg/L	0.005	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	<0.003 mg/L	0.003	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	291 mg/L	0.1	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: J Clayton Date: 10/12/04

SCOEPA00023192

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: October 15, 2004

SAMPLING PERIOD: September 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: J Clayton Date: 10/12/04

Document1

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9.2.04 Oven Temp: 104 C Analyst: DI

Date In: 9.2.04 Time In/Out: 1330 / 1108 {9.3.04}

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0879	0.0879	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0897	0.0894	0.6
3	CE FAB-2	500	0.0875	0.0872	0.6
				Average CE FAB-2 TSS	0.6
4	OWW	100	~~0.0~~ DI 0.0881 DI 0.1179	0.0876	303
5	OWW	100	0.1149	0.0876	273
				Average OWW TSS	288
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

SCOEPA00023194

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9-9-04 Oven Temp: ~~300~~ 104 C Analyst: DI

Date In: 9-9-04 Time In/Out: 1015 / 1430

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0867	0.0867	0.0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0897	0.0877	4
3	CE FAB-2	500	0.0911	0.0893	4
				Average CE FAB-2 TSS	4
4	OWW	100	0.0915	0.0883	32
5	OWW	100	0.0921	0.0887	34
				Average OWW TSS	33
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference:
1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

N:ENVIRONMENTAL\FACLAB\WWTP\BENCH\TSSB.DOC

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9-16-04 Oven Temp: 104 C Analyst: DI

Date In: 9-17-04 Time In/Out: 1100 / 1400

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0878	0.0878	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0886	0.0876	2
3	CE FAB-2	500	0.0890	0.0882	1.6
				Average CE FAB-2 TSS	1.8
4	OWW	100	0.0914	0.0878	36
5	OWW	100	0.0930 D1	0.0893	37
				Average OWW TSS	~~36.6~~ D1 36.5
7	SWW	50	0.1318	0.0888	860
8	SWW	50	0.1303	0.0879	848
				Average TSS	854

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

N:ENVIRONMENTAL\FACLAB\WWTP\BENCH\TSSB.DOC

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9-23-04 Oven Temp: 104 C Analyst: DJ

Date In: 9-23-04 Time In/Out: 1030 / 1430

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0878	0.0878	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0901	0.0893	1.6
3	CE FAB-2	500	0.0885	0.0877	1.6
				Average CE FAB-2 TSS	1.6
4	OWW	100	0.0976	0.0915	61
5	OWW	100	0.0954	0.0891	63
				Average OWW TSS	62
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

SCOEPA00023197

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9-30-04 Oven Temp: 104 C Analyst: DI

Date In: 9-30-04 Time In/Out: 1100 / 1435

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0900	0.0900	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0902	0.0897	~~5~~ 1
3	CE FAB-2	500	0.0900	0.0895	1
				Average CE FAB-2 TSS	1.0
4	OWW	25	0.1101	0.0899	808
5	OWW	25	0.1094	0.0892	808
				Average OWW TSS	808
① 2	OWW	~~50~~ 100	0.1414	0.0894	~~515~~ 520
① 3	OWW	~~50~~ 100	0.1403	0.0888	~~520~~ 515
				Average TSS	517.5

Comments: ① 24hr composite - 10/1/04 resampled due to high TSS.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

N:ENVIRONMENTAL\FACLAB\WWTP\BENCH\TSSB.DOC

SCOEPA00023198

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A40902BO
Page Number: 9 of 17

Lab Sample ID: A40902BO-3
Field ID: 04-88-OWW-C
Date/Time: 09/02/04 0740
Matrix: Waste Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units	Analysis Date	Analyst
Arsenic	EPA 200.8	0.003	ND	mg/L	09/10/04	CV

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A40902BO
Page Number: 13 of 17

Lab Sample ID: A40902BO-4
Field ID: 04-89-OWW-G
Date/Time: 09/02/04 0740
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: CLISolventScan; Solvent Scan.
Analysis Date: 09/13/04
Analyst: JB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Isopropanol	1.	ND	8.

Results expressed as mg/l unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A40902BO
Page Number: 10 of 17

Lab Sample ID: A40902BO-4
Field ID: 04-89-OWW-G
Date/Time: 09/02/04 0740
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 09/05/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	2000.
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	6.
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	ND
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A40902BO
Page Number: 11 of 17

Lab Sample ID: A40902BO-4
Field ID: 04-89-OWW-G
Date/Time: 09/02/04 0740
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 09/05/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
1,1-Dichloropropene	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	ND
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND

Results expressed as $\mu g/L$ unless otherwise noted.
ND means none detected at or above the detection limit listed.

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A40902BO

Lab Sample ID: A40902BO-4
Field ID: 04-89-OWW-G
Date/Time: 09/02/04 0740
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 09/05/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	5.	ND	ND
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
Total Xylenes	10.	ND	ND
Dibromofluoromethane (Surr.)	---	---	119.%
1,2-Dichloroethane-d4 (Surr.)	---	---	128.%
Toluene-d8 (Surr.)	---	---	103.%
4-Bromofluorobenzene (Surr.)	---	---	99.%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A40902BO
Page Number: 14 of 17

Lab Sample ID: A40902BO-4
Field ID: 04-89-OWW-G
Date/Time: 09/02/04 0740
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: EPA 8270C; EPA 8270C
Analysis Date: 09/10/04
Analyst: JB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acenaphthene	0.0062	ND	ND
Acenaphthylene	0.0062	ND	ND
Anthracene	0.0062	ND	ND
Azobenzene	0.0051	ND	ND
Benzo(a)anthracene	0.0062	ND	ND
Benzo(a)pyrene	0.0062	ND	ND
Benzo(b)fluoranthene	0.0062	ND	ND
Benzo(g,h,i)perylene	0.0062	ND	ND
Benzo(k)fluoranthene	0.0062	ND	ND
bis(2-Chloroethoxy)methane	0.0062	ND	ND
bis(2-Chloroethyl)ether	0.0062	ND	ND
bis(2-Chloroisopropyl)ether	0.0062	ND	ND
Bis(2-ethylhexyl)phthalate	0.0062	ND	ND
4-Bromophenyl phenyl ether	0.0062	ND	ND
Butyl benzyl phthalate	0.0062	ND	ND
4-Chloro-3-methylphenol	0.0062	ND	ND
2-Chloronaphthalene	0.0062	ND	ND
2-Chlorophenol	0.0062	ND	ND
4-Chlorophenyl phenyl ether	0.0062	ND	ND
Chrysene	0.0062	ND	ND
Di-n-butylphthalate	0.0062	ND	ND
Di-n-octylphthalate	0.0062	ND	ND
Dibenzo(a,h)anthracene	0.0062	ND	ND
1,2-Dichlorobenzene	0.0062	ND	ND
1,4-Dichlorobenzene	0.0062	ND	ND
1,3-Dichlorobenzene	0.0062	ND	ND
2,4-Dichlorophenol	0.0062	ND	ND
Diethyl phthalate	0.0062	ND	ND
2,4-Dimethylphenol	0.0062	ND	ND
Dimethylphthalate	0.0062	ND	ND

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A40902BO

Lab Sample ID: A40902BO-4
Field ID: 04-89-OWW-G
Date/Time: 09/02/04 0740
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: EPA 8270C; EPA 8270C
Analysis Date: 09/10/04
Analyst: JB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
2,4-Dinitrophenol	0.0062	ND	ND
2,4-Dinitrotoluene	0.0062	ND	ND
2,6-Dinitrotoluene	0.0062	ND	ND
Fluoranthene	0.0062	ND	ND
Fluorene	0.0062	ND	ND
Hexachlorobenzene	0.0062	ND	ND
Hexachlorobutadiene	0.0062	ND	ND
Hexachloroethane	0.0062	ND	ND
Indeno(1,2,3-cd)pyrene	0.0062	ND	ND
Isophorone	0.0062	ND	ND
2-Methyl-4,6-dinitrophenol	0.0062	ND	ND
N-Nitrosodi-n-propylamine	0.0062	ND	ND
Naphthalene	0.0062	ND	ND
Nitrobenzene	0.0062	ND	ND
4-Nitrophenol	0.0062	ND	ND
2-Nitrophenol	0.0062	ND	ND
Pentachlorophenol	0.0062	ND	ND
Phenanthrene	0.0062	ND	ND
Phenol	0.0062	ND	ND
Pyrene	0.0062	ND	ND
1,2,4-Trichlorobenzene	0.0062	ND	ND
2,4,6-Trichlorophenol	0.0062	ND	ND
1,2-Diphenylhydrazine	0.0051	ND	ND
2-Fluorobiphenyl (Surr.)	---	---	121.%
2-Fluorophenol (Surr.)	---	---	60.%
Nitrobenzene-d5 (Surr.)	---	---	129.%
Phenol-d6 (Surr.)	---	---	29.%
Terphenyl-d14 (Surr.)	---	---	135.%
2,4,6-Tribromophenol (Surr.)	---	---	105.%

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A40902BO

Analytes	Expected raw values, ug/L	LCS Water Raw results, ug/L	LCS Water Recovery,%	8260MS A40830AH Raw results, ug/L	8260MS A40830AH Recovery,%	8260MSD A40830AH Raw results, ug/L	8260MSD A40830AH Recovery,%	RPD, %	Acceptance limits %
1,1-Dichloroethene	20.00	22.30	111.50%	25.00	125.00%	21.50	107.50%	15.05%	61-145
Benzene	20.00	19.75	98.75%	20.63	103.15%	19.07	95.35%	7.86%	71-120
Trichloroethene	20.00	21.90	109.50%	21.66	108.30%	20.42	102.10%	5.89%	76-127
Toluene	20.00	20.37	101.85%	20.57	102.85%	20.06	100.30%	2.51%	76-125
Chlorobenzene	20.00	19.89	99.45%	21.30	106.50%	19.77	98.85%	7.45%	75-130
Dibromofluoromethane (surr)			110.00%		115.00%		117.00%		70-130
1,2-Dichloroethane-d4 (surr)			120.00%		117.00%		117.00%		70-130
Toluene-d8 (surr)			104.00%		100.00%		106.00%		70-130
4-Bromofluorobenzene (surr)			94.00%		92.00%		95.00%		70-130

SCOEPA00023206

ORELAP 100028

Analytical Data

Siltronic Corporation

Job Number: A40902BO

		LCS_09/08/04		8270_MS_09/08/04 A40715N		
Analytes	Expected raw values, µg/L	Raw results, µg/L	Recovery,%	Raw results, µg/L	Recovery,%	Acceptance Limits, %
Phenol	15	7.88	52.53%	6.06	40.40%	D-135
2-Chlorophenol	15	14.7	98.00%	14.1	94.00%	D-135
1,4-Dichlorobenzene	15	12.8	85.33%	12.6	84.00%	50-150
N-Nitrosodi-n-propylamine	15	16.7	111.33%	15.5	103.33%	50-150
1,2,4-Trichlorobenzene	15	12.2	81.33%	13.6	90.67%	50-150
4-Chloro-3-methyl phenol	8	7.6	95.00%	7.42	92.75%	D-135
Acenaphthene	15	12.6	84.00%	13.5	90.00%	50-150
2.4-Dinitrophenol	8	6.8	85.00%	6.4	80.00%	D-135
2,4-Dinitrotoluene	15	15.4	102.67%	16	106.67%	50-150
Pentachlorophenol	8	8.12	101.50%	7.42	92.75%	D-135
Pyrene	15	14.6	97.33%	14.8	98.67%	50-150
2-Fluorophenol			62.00%		55.00%	10-110
Phenol-D6			42.00%		34.00%	21-110
Nitrobenzene-d5			97.00%		81.00%	35-114
2-Fluorobiphenyl			81.00%		78.00%	43-116
2,4,6-Tribromophenol			94.00%		93.00%	10-123
Terphenyl-d14			100.00%		92.00%	33-141

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Siltronic
Mailing Address: 7200 N W Front Ave
Portland, Oregon
Phone: (503) 219-7274 FAX: (503) 417-4141

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 86~89
Project Name: Monthly
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: Di

FOR LABORATORY USE ONLY Page: of
Job Number:
Custabbr: NEW
VISA M/C Cardholder:
Card # Exp:
Cash / Check / CC $ #
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc	ID	#	Collection Date	Collection Time	Media	Analysis Requested	Test Profile
04-86-CE-C				9/2/04	0740		Cr(T), BOD	
04-87-CE-g				9/2/04	0740		8260, 8270, 1-2 Diphenylhydrazine	
04-88-OWW-C				9/2/04	0740		As(T)	
04-89-OWW-g				9/2/04	0740		8260, 8270, 1-2 Diphenylhydrazine	

Sampled By: Dianne Irish
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 9/2/04

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Irish	9/2/04	0945	[signature]	9-2-04	0945
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Siltronic Corporation Site ID 93450
ADDRESS 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-18)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	9	1	TO	2004	9	30
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	3,255	3,562	M^3/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	16.9	21.4	Kg/day	--	5.2	6.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	154	342		--	15	30				
TSS	SAMPLE MEASUREMENT	5.8	12.7	Kg/day	--	1.8	4.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	236	695		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			Kg/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.05	0.12		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.004	<0.004	Kg/day	--	<0.001	0.001	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	26.3	31.9	Kg/day	--	8.1	9.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	178	365		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	10	15				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under State statutes may be similar. [more up to $10,000 and up to 6 months imprisonment for failure to submit DMRs and 3 years...])

Siltronic Corp. by: Tom Clayton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 04 MO 10 DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER 068 JWC

SCOEPA00023209

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Siltronic Corporation Site ID 93450
ADDRESS 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(1-16) PERMIT NUMBER: 101128
(17-19) DISCHARGE NUMBER: Outfall 001

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	9	1	TO	2004	9	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	Kg/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
Turbidity	SAMPLE MEASUREMENT					0.1	8.7	NTC		6/1	Grab
	PERMIT REQUIREMENT									One sample every 4 hours	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Siltronic Corp. by:
James Clayton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 04 MO 10 DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023210

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Siltronic Corporation Site ID 93450

ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2004	9	1	TO	2004	9	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (46-53) MINIMUM	(54-61) AVERAGE	MAXIMUM	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (66-69)	SAMPLE TYPE (70-71)
MV-3 Flow	SAMPLE MEASUREMENT	413	670	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.7	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	10	15				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years).

Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 10 | DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023211

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Siltronic Corporation Site ID 93450
ADDRESS 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(7-16)	(17-18)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	9	1	TO	2004	9	30
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

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PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(46-53) MAXIMUM	(46-53) UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(54-61) UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-69)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	3,669	4,058	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	76.6	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	6.30	7.32	8.21			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Siltronic Corp. by:
James Clayton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 04 MO 10 DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023212

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

ER064:JC

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

2004-September-xx

August 2004 Bioassay results

Dear Dr. Zais,

The Bioassay of Siltronic's effluent **passes the requirements** of our NPDES permit number 101128.

The Bioassay was performed on three species: *Ceriodaphnia dubia* (water flea), *Pimephales promelas* (fathead minnow) and *Raphidocelis subcapitata* (green algae). The analyses were performed at the following dilutions, which are based on the average of three mixing zone dilution studies[1], as percentage effluent: 1.90%, 3.75%, 7.5%, 15% and 30%. Samples were taken August 10 though 17, 2004 for *Ceriodaphnia dubia* and *Pimephales promelas*, and August 31, 2004 for *Raphidocelis subcapitata*[2]. The analytical methods used were "*Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Weber, C. et al. (1994); EPA/600/4-91/002*" and "*Whole Effluent Toxicity Testing Guidance Document, Oregon Department of Environmental Quality, January 1993*".

Ceriodaphnia dubia

Acute Toxicity test results indicated no statistically significant reduction in survival at any of the effluent concentrations tested when compared to the control. The no observed effect concentration (NOEC) and lowest observed effect concentration (LOEC) were 30% and greater than 30% effluent, respectively. Control survival was 100%. The LC_{50} value (concentration of sample causing a 50% reduction in survival) was calculated to be greater than 30% effluent. The effluent dilution concentration at the edge of Siltronic's zone of immediate dilution (ZID) is $\geq$ 13.4% effluent[1].

Chronic Toxicity test results show a statistically significant reduction in reproduction at 15% and 30% effluent concentrations when compared to the control. The NOEC and LOEC were 7.5% and 15% effluent, respectively. Control survival was 90%. The IC_{25} value (concentration of sample causing a 25% reduction in biological measurement) calculated on reproduction was 10.6% effluent concentration. The effluent dilution concentration at the edge of Siltronic's mixing zone is $\geq$ 1.8% effluent[1].

Pimephales promelas (dual endpoint)

Acute Toxicity test results indicated no statistically significant reduction in survival or growth at any of the effluent concentrations tested when compared to the control. The NOEC and LOEC were 30% and greater than 30% effluent, respectively. Control survival was 97.5%. The LC_{50} value was calculated to be greater than 30% effluent. The effluent dilution concentration at the edge of Siltronic's ZID is $\geq$ 13.4% effluent[1].

Chronic Toxicity test results indicated no statistically significant reduction in survival or growth at any of the effluent concentrations tested when compared to the control. The NOEC and LOEC were 30% and greater than 30% effluent, respectively. Control survival was 90%. The IC_{25} value was calculated to be greater than 30% effluent. The effluent dilution concentration at the edge of Siltronic's mixing zone is $\geq$ 1.8% effluent[1].

Raphidocelis subcapitata

Chronic Toxicity test results indicated no statistically significant reduction in growth at any of the effluent concentrations tested when compared to the control. The NOEC and LOEC were 30% and greater than 30% effluent, respectively. The IC_{25} value was calculated to be greater than 30% effluent. The effluent dilution concentration at the edge of Siltronic's mixing zone is ≥ 1.8% effluent[1].

Summary of CH2MHill results for August 2004

Acute (48-hour) Results:	Ceriodaphnia dubia	Pimephales promelas	
NOEC	30%	30% (% Effluent)	
ZID Pass Criteria[1]	≥13.4%	≥13.4%	
Chronic Results:	**Ceriodaphnia dubia**	**Pimephales promelas**	**Raphidocelis subcapitata**
NOEC	7.5%	30%	30% (% Effluent)
Mixing Zone Pass Criteria[1]	≥ 1.8%	≥ 1.8%	≥ 1.8%

If you have any questions, please contact me.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

cc: Tom Rothschild
Tom McCue
NPDES Bioassay File

[1] CH2MHILL Mixing Zone Effluent Dilution Evaluations prepared for Siltronic Corporation in 1994, 1995 and 1996. The NPDES discharge permit defines, for Siltronic's effluent discharge to the Willamette River, a zone of initial dilution (ZID) having a 5-foot radius from the point of discharge at Outfall 003, and a mixing zone having a 50-foot radius from the point of discharge at Outfall 003. The average of the three mixing zone dilution studies identified worst-case (0.1-feet/ second as current velocity) dilutions at distances of 5 and 50 feet from the discharge point of 7.5:1 and 55.5:1 ($Q_{Total}/Q_{Effluent}$), respectively. These dilutions are equivalent to 13.4% effluent at the edge of the ZID and 1.8% effluent at the edge of the mixing zone. According to the discharge permit, the effluent is considered to be acutely toxic if an acute test No-Observable-Effects-Concentration (NOEC) is less than 13.4% effluent, and is considered to be chronically toxic if a chronic test NOEC is less than 1.8% effluent. **Conversely, the effluent is in compliance for toxicity if the acute test NOEC is greater than or equal to (≥) 13.4% effluent and the chronic test NOEC is greater than or equal to (≥) 1.8% effluent.**

[2] The *Raphidocelis subcapitata* (green algae) analysis was left off Chain of Custody for the samples taken August 10 – 17. Dr. Elliot Zais, DEQ Sr. Environmental Engineer, Water Quality Source Control, verbally approved that Siltronic could collect a 24 hour composite sample August 31, 2004 and submit the results to complete the Bioassay testing requirements for 2004. Because the *Raphidocelis subcapitata* (green algae) analysis was new for 2004, two separate 24 hour effluent samples were analyzed earlier in the year, specifically one in January 2004 and one in April 2004. The results for both samples were that the NOEC and LOEC were 30% and greater than 30% effluent, respectively. The IC_{25} value was calculated to be greater than 30% effluent.

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

ER: 063.JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

2004-September-10

August 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the August 2004 Industrial Discharge Report for Siltronic Corporation Municipal Discharge permit 469-01. Siltronic has operated in compliance with the Permit for this reporting period.

Siltronic did experience an operational upset August 22. Due to a valve failure, Siltronic's Organic Wastewater (OWW) from Fab 1 was diverted directly to the City, bypassing Siltronic's Wastewater Treatment Plant (WWTP). Under normal operations Siltronic's OWW wastestreams from Fab 1 and Fab 2 are sent to the City after pH adjustments, if needed, at the WWTP. The upset condition was an exceptional incident in which there was an unintentional release of the Fab 1 OWW directly to the City due to the failure of a valve and by-pass line for that valve. During the upset the pH of the OWW wastestream was measured manually every 15 minutes. Based on data collected by Siltronic's Facilities Operations Staff, the pH permit conditions were not exceeded during the upset period. The permit pH limit for this wastestream is 5.0 to 11.5.

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
POTW-IDR
Special Account Meter Report Document

cc: Tom Rothschild
POTW-IDR File

7003 2260 0001 3454 3107

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: September 15,2004

SAMPLING PERIOD: August 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	FOXBORO	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: J Clayton Date: 9/10/04

Document2

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Siltronic Corporation Site ID 93450
ADDRESS 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(3-16) (17-19)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	8	1	TO	2004	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	2,942	3,752	M^3/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	9.5	13.7	Kg/day	--	3.1	4.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	154	342		--	15	30				
TSS	SAMPLE MEASUREMENT	2.7	4.1	Kg/day	--	0.9	1.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	236	695		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			Kg/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.05	0.12		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	0.004	0.007	Kg/day	--	0.002	0.002	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	24.2	28.9	Kg/day	--	8.2	8.7	mg/l		1/7	24HC
	PERMIT REQUIREMENT	178	365		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	10	15				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

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Siltronic Corp. by:
J Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 9 | DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Error

Chrome batches are no longer being treated on site. 8/4: Outage for 10 mins 43 sec @ 4.9 pH
8/4: Outage for 1 mins 38 sec @ 5.0 pH. 8/21: Outage for 17 mins 38 sec @ 5.7 pH.

SCOEPA00023217

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Siltronic Corporation Site ID 93450

ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(3-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
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Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	8	1	TO	2004	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

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PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	Kg/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
Turbidity	SAMPLE MEASUREMENT					1.6	6.1	NTC		6/1	Grab
	PERMIT REQUIREMENT									One sample every 4 hours	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Siltronic Corp. by: J Claxton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 9 | DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023218

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Siltronic Corporation Site ID 93450
ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	8	1	TO	2004	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	537	750	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.3	0.6	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	10	15				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Siltronic Corp. by:
J Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 04 MO 9 DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023219

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Siltronic Corporation Site ID 93450

ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	8	1	TO	2004	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	3,479	4,369	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	78.9	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	4.91	7.12	8.81			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years)

Siltronic Corp. by:

J Claxton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	04	9	10
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023220

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Chris Redman
Oregon DEQ Laboratory Division
1712 SW 11th Avenue
Portland, OR 97201

ER: 060.JWC

2004-September-2

2004 Discharge Monitoring Report – Quality Assurance Study 24

Dear Mr. Redman,

I have enclosed our EPA-420 and the test results for Siltronic Corporation, NPDES# OR0030589 for DMR-QA Study 24.

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
DMRQA-24B data
EPA form 420

cc: Tom Rothschild
DMRQA-24 file

STAPLE HERE

NPDES PERMITTEE DATA REPORT FORM

Form Approved. ICR No. 0280.08 Approval Expires 1/31/2007

United States Environmental Protection Agency
Laboratory DMR-QA Evaluation Study 24
Laboratory Performance Evaluation
(These data are collected under the authority of the Federal Water Pollution Control Act.)

EPA USE ONLY	
N	1
1	2

NPDES Permit Number										
O	R	0	0	3	0	5	8	9		
3	4	5	6	7	8	9	10	11	12	13

Permit Extension

Current Permittee Mailing Address

NPDES Permit Number: OR0030589 Phone 503-219-7532

7200 NW FRONT AVENUE

PORTLAND, OR 97210-3676

ATTENTION:
Follow the checklist on next page for instructions on completing this form and submitting data for evaluation.

Enter Permittee Name as it Should Appear in Report Heading:

S	I	L	T	R	O	N	I	C		C	O	R	P	O	R	A	T	I	O	N																			
14	15	16	17	18	19	20	21	22	24	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49					

For DMR-QA Study 23, conducted in 2003, the permittee:

Received Samples:	YES	N
	X	
	50	51

Submitted Data:	YES	NO
	X	
	52	53

Received a Report in Response:	YES	NO
	X	
	54	55

Certification by Permit Holder or Authorized Representative
(as per 40 CFR Part 122.22 - see instructions.)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Each reported value was produced from a single analytical run using the analytical system that routinely performs these analyses to produce compliance monitoring data required under our National Pollutant Discharge Elimination System (NPDES) permit. Neither I nor any of my subordinates compared our results with results from independent analyses conducted by us or any other laboratory before we reported our results to the USEPA. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title of Certifying Official (Type or Print)	Signature	Date Signed
Tom McCue Environmental Manager	Jim Claxton for Tom McCue	9/2/04

Address of Certifying Official (if different from Permittee address above.)	Telephone Number
	503-219-7532

EPA-420 (Cin), Rev. 04-00. Previous editions are obsolete.

SCOEPA00023222

United States Environmental Protection Agency
DMR-QA Study 24
Laboratory Performance Evaluation
(These data are collected under the authority of Federal Water Pollution Control Act.)

NPDES Permit Number: OR0030589

Identification of All CHEM & TOX Laboratories who did Analyses for this Permit
Permit Number:

N 2
1 2

Name	Address	Lab Code assigned by USEPA	Lab Analysis- Put an 'X' in all that apply: Chem	Lab Analysis- Put an 'X' in all that apply: Tox	Lab Type - choose one: F = Federal S = State G = Local Gov. C=Commercial I = Industrial O = Other
Siltronic Corporation	7200 NW Front Avenue Portland, OR 97210-3676	OR0100 6 3 4 5 6 7 8 9	X 10	 11	I 12
Coffey Laboratories,INC.	12423 NE Whitaker Way POrtland, OR 97830	OR000 11 13 14 15 16 17 18 19	X 20	 22	C 22
CH2MHill	2300 NW Walnut Blvd. Corvallis, OR 97330-3538	OR000 04 24 24 25 26 27 28 29	 30	X 31	C 32
		 33 34 35 36 37 38 39	 40	 41	 42

EPA-420 (Cin), Rev. 04-00. Previous editions are obsolete. Continued on the next page

SCOEPA00023223

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Duration: 06/02/04 - 09/03/04

MAIL OR FAX COMPLETED REPORT TO:

SPEX Certiprep, Inc.
PT Coordinator
CRM Division
203 Norcross Ave.
Metuchen, NJ 08840
FAX: 732-494-1747

IMPORTANT: SPEX CERTIPREP MUST RECEIVE YOUR COMPLETED REPORTS BY MIDNIGHT EST ON *09/03/04*

REPORT APPROVED BY:
(Laboratory Official)

(Required - Enter corrections below)

EPA LAB ID: OR0100006

Name: Tom Rothschild
Title: Fac. Lab Chemist
Company Siltronic Corporation.
Address: 7200 NW Front Avenue
Portland, OR 97210-3676

Phone #: 503-219-7374
Fax #: 503-417-4144
Signature: Thomas J. Rothschild
Date: 2 Sep 2004

REPORT APPROVED BY:
(Permittee Official)

(Unless otherwise specified, the Performance Report will be sent to the person indicated below)

(Required - Enter corrections below)

PERMITTEE #: OR0003058 9

Extension (if applicable)

Name: Tom McCue
Title: Environmental Manager
Company Siltronic Corporation
Address: 7200 NW Front Avenue
Portland, OR 97210-3676

Phone #: 503-219-7532
Fax #: 503-210-7599
Signature: Jim Clayton ENV. ENG for Tom McCue
Date: 9/2/04

PLEASE FILL IN THE FOLLOWING INFORMATION REGARDING YOUR DMRQA COORDINATOR:

Contact Name: Chris Redman
Agency: Oregon DEQ Lab Div.
Address: 1712 SW 11th Avenue
Portland, OR 97201

Phone #: 503-229-5983 x254
Fax #:

PLEASE TREAT EACH PT STUDY SAMPLE THE SAME WAY YOU WOULD TREAT A ROUTINE SAMPLE.

DO NOT REVEAL RESULTS OR ANY OTHER ASPECT OF THIS TEST TO ANY PERSON OR OTHER LABORATORY UNTIL THE TEST ROUND IS CONCLUDED.

SPEX CertiPrep and Protocol Analytical Supplies confirm that this PT Program complies with NIST Handbook 150: NVLAP Procedures and General Requirements and with NIST Handbook 150-19: Chemical Calibration – Providers of Proficiency Testing. PT materials and PT studies have been developed using the criteria in National Standards for Water Proficiency Testing Studies Criteria Document, USEPA dated December 1998.

No claims against SPEX CERTIPREP, Inc. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this product shall be greater in amount than the purchase price of the product in respect of which damages are claimed, and in no event shall SPEX CERTIPREP, Inc. be liable for any loss of profits or any incidental, special or consequential damages.

SO#: 118060-2 *CID:* 110180*1

SCOEPA00023224

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/02/04 ***Closing Date:*** 09/03/04

DMRQA NUTRIENTS (Ampule 1 of 2)

Catalog Number: PT-NUT-DMRQA(1)

Siltronic Corp.

7200 NW Front Avenue

Portland *OR* *97210*

Sales Order: 118060-2

Customer #: 110180*1

(Required - Enter corrections below)

EPA Lab Id #: O R Ø 1 Ø Ø 6

(Required - Enter corrections below)

Permittee #: O R Ø Ø 3 Ø 5 8 9

Extension (if applicable)

Lot #: 26-24NUT-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code (See enclosed list)*	*Method Description*	</>	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
Ammonia as N	*0031*		N/A				*MILLIGRAMS/L*	/ /
Nitrate as N	*0032*						*MILLIGRAMS/L*	/ /
Orthophosphate as P	*0033*						*MILLIGRAMS/L*	/ /

Please report the results on the diluted sample to three significant figures in mg/L.

' : VAF (Voluntary Analyte Flag) -- Mark the VAF box if this analyte is voluntary for your facility.

Authorized Signature: Thomas J. Rothschild ***Date:*** 2 Sep 2004

IMPORTANT: SPEX CertiPrep must receive your completed forms no later than 09/03/04

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/02/04 ***Closing Date:*** 09/03/04

DMRQA NUTRIENTS (Ampule 2 of 2)

Catalog Number: PT-NUT-DMRQA(2)

Siltronic Corp.

7200 NW Front Avenue

Portland *OR* *97210*

Sales Order: 118060-2

Customer #: 110180*1

(Required - Enter corrections below)

EPA Lab Id #: ORØ1Ø6

(Required - Enter corrections below)

Permittee #: ORØØ3Ø589

Extension (if applicable)

Lot #: 26-25NUT-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code (See enclosed list)*	*Method Description*	</>	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
Total Kjeldahl Nitrogen(TKN)	*0034*						MILLIGRAMS/L	/ /
Total Phosphorous	*0035*		200258Ø3	SM4500-PE18ED		5.20	MILLIGRAMS/L	09/02/04

Please report the results on the diluted sample to three significant figures in mg/L.

' : VAF (Voluntary Analyte Flag) -- Mark the VAF box if this analyte is voluntary for your facility.

Authorized Signature: Thomas J. Rothschild ***Date:*** 28 Sep 2004

IMPORTANT: SPEX CertiPrep must receive your completed forms no later than 09/03/04

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/02/04 ***Closing Date:*** 09/03/04

DMRQA pH

Catalog Number: *PT-PH-DMRQA*

Siltronic Corp.

7200 NW Front Avenue

Portland *OR* *97210*

Sales Order: 118060-2

Customer #: 110180*1

(Required - Enter corrections below)

EPA Lab Id #: O R Ø 1 Ø Ø 6

(Required - Enter corrections below)

Permittee #: O R Ø Ø 3 Ø 5 8 9

Extension (if applicable)

Lot #: 26-134PH-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code (See enclosed list)*	*Method Description*	</>	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
pH	0019		2001640 4	SM 20 ED 4500 H+ B		7.36	UNITS	09/01/04

Please report the result to three significant figures in standard units.

': VAF (Voluntary Analyte Flag) -- Mark the VAF box if this analyte is voluntary for your facility.

Authorized Signature: Thomas J. Rothschild ***Date:*** 2 Sep 2004

IMPORTANT: SPEX CertiPrep must receive your completed forms no later than 09/03/04

Lab Code: 200392-0 SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

SCOEPA00023227

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/02/04 ***Closing Date:*** 09/03/04

DMRQA NON-FILTERABLE RESIDUE

Catalog Number: PT-SOL-DMRQA

Siltronic Corp.

7200 NW Front Avenue

Portland OR 97210

Sales Order: 118060-2

Customer #: 110180*1

(Required - Enter corrections below)

EPA Lab Id #: ORØ1Ø06

(Required - Enter corrections below)

Permittee #: ORØ03589

Extension (if applicable)

Lot #: 26-61SOL-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code (See enclosed list)*	*Method Description*	</>	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
Non-Filterable Residue(TSS)	0072		20004802	SM18THED2540D		95.0	MILLIGRAMS/L	08/27/04

Please report the result on the sample to three significant figures in mg/L based on 0.5 grams of sample weight.

' : VAF (Voluntary Analyte Flag) -- Mark the VAF box if this analyte is voluntary for your facility.

Authorized Signature: Thomas J. Rothschild ***Date:*** 25 Sep 2004

IMPORTANT: SPEX CertiPrep must receive your completed forms no later than 09/03/04

NVLAP® Lab Code: 200392-0

SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

ISO 9001 CERTIFIED

SCOEPA00023228

DOC NSI-38
Revision WP-095/DMRQA-24B

NSI WATER POLLUTION LABORATORY PERFORMANCE EVALUATION
STUDY WP-095/DMRQA-24B

NVLAP LAB CODE# 200440-0

(1) NSI LAB CODE: N04395

(2) EVALUATE AS (CHOOSE ONE OR BOTH): ☒ **WP-095** ☐ **DMRQA-24B (PERMITTEES ONLY)**

COFFEY LABORATORIES, INC.
COMPANY NAME

RACHEDA KAADY
ATTENTION

(503) 254-1794 ex 214
PHONE NUMBER

12423 NE Whitaker Way
MAILING ADDRESS FOR REPORT

Portland
CITY

OR
STATE

97230
ZIP CODE

(3) REPORT EVALUATION RESULTS FOR WP-095 TO:

☐ Report Only To Laboratory ☒ Report To Accreditation Agency

ORELAP ID; State Lab Code: OR100028 **(If Available)**

US EPA Labcode: OR00011 **(Required)**

Primary Accreditation Agency Address:

Agency ORELAP / Public Health Laboratory

Attention Dr. Drew Rowing

Address 1717 SW 10th Ave

City/State/Zipcode Portland, OR 97201

For additional agencies see last page of this packet

(4) REPORT MY EVALUATION FOR DMRQA-24:

NPDES Permit Number OR0030589 **(Required for DMRQA-24)**

DMRQA-24 results will be submitted to the appropriate state coordinator and USEPA by the EPA deadline.

SEND COMPLETED FORMS TO:

NSI SOLUTIONS, INC.
7517 PRECISION DRIVE, SUITE 101
RALEIGH, NC 27617
ATTENTION: TESTING COORDINATOR

OR

ENTER YOUR RESULTS ON-LINE AT WWW.NSI-ES.COM

As a participant in this NSI Water Pollution Study, I affirm that we have abided by the following conditions of this study. 1) We have not sent test samples to any other laboratory for analysis. 2) We have not knowingly received test samples from another laboratory for analysis. 3) We have not attempted to obtain or provide other laboratories with any information about the target values or acceptance ranges of the test samples from NSI.

APPROVED BY: Racheda Kaady

SIGNATURE | DATE | E-MAIL

(503) 254-1794
TELEPHONE

RACHEDA KAADY
(PRINT NAME HERE)

QA Director
TITLE

Report Forms Must Be Received By August 27, 2004. No Faxes Can Be Accepted.

Aug 23 04 10:57a Coffey Labs 5032541452 p.5

STUDY TYPE: WPCHEM/DMRQA CHEM

STUDY NUMBER: WP-095/DMRQA-24B

NSI LABCODE: N04395

PEI-034-1 TRACE METALS LOT# 079

*** NELAC Method Code and NELAC Technology Code Are Not Required For DMRQA-24 Reporting Purposes**

Voluntary Analytes[1]		Method Description	NELAC Method Code	NELAC Technology Code	Result	Units	Analysis Date Month/Day	USEPA Labcode[2]
X	Aluminum	EPA 200.8	10014605	102010	2318	ug/L	0812	OR00011
X	Antimony	=	=	=	606	ug/L	=	
X	Arsenic	=	=	=	165	ug/L	=	
X	Barium	=	=	=	302	ug/L	=	
X	Beryllium	=	=	=	850	ug/L	=	
X	Cadmium	=	=	=	331	ug/L	=	
X	Chromium	=	=	=	498	ug/L	=	
X	Cobalt	=	=	=	504	ug/L	=	
X	Copper	=	=	=	401	ug/L	=	
X	Iron	=			1038	ug/L	=	

[1] Voluntary analytes are analytes that you are reporting that are not listed on your permit or that are not included on the base DMRQA-24 analyte list. If you are reporting a value for a voluntary, please check the box for that analyte on this form.

[2] Indicate the seven-digit USEPA Labcode for the lab that performed the analysis for each analyte.

Reporting Forms Must Be Received By August 27, 2004 - Enter Results Online - [illegible]

P.4
5032541452
Aug 23 04 10:57a Coffey Labs

STUDY TYPE: WPCHEM/DMRQA CHEM

STUDY NUMBER: WP-095/DMRQA-24B

NSI LABCODE: N024395

PEI-034-1 TRACE METALS LOT# 079

*** NELAC Method Code and NELAC Technology Code Are Not Required For DMRQA-24 Reporting Purposes**

Voluntary Analytes[1]		Method Description	NELAC Method Code	NELAC Technology Code	Result	Units	Analysis Date Month/Day	USEPA Labcode[2]
X	Aluminum	EPA 200.7	10013602	1020015	2107	ug/L	0817	0R0001
X	Antimony	EPA 204.2	10017604	1010200	578	ug/L	0817	
X	Arsenic	EPA 206.2	10018403	1010200		ug/L	08	
X	Barium	EPA 200.7	10013602	1020015	294	ug/L	0817	
X	Beryllium	=	=	=	830	ug/L	0817	
X	Cadmium	=	=	=	325	ug/L	0820	
	Chromium	EPA 218.2	10026207	1010200	530	ug/L	0818	
X	Cobalt	EPA 200.7	10013602	1020015	504	ug/L	0817	
X	Copper	=	=	=	405	ug/L	0817	
X	Iron	=	=	=	930	ug/L	0817	

[1] Voluntary analytes are analytes that you are reporting that are not listed on your permit or that are not included on the base DMRQA-24 analyte list. If you are reporting a value for a voluntary, please check the box for that analyte on this form.

[2] Indicate the seven-digit USEPA Labcode for the lab that performed the analysis for each analyte.

Reporting Forms Must Be Received By August 27, 2004. Enter Results On-line At www.nsi-es.com.

STUDY TYPE: WPCHEM/DMRQA CHEM

STUDY NUMBER: WP-095/DMRQA-24B

NSI LABCODE: N04395

Aug 23 04 10:56a Coffey Labs 5032541452 p.3

PEI-026 DEMAND LOT# 079

* NELAC Method Code and NELAC Technology Code Are Not Required For DMRQA-24 Reporting Purposes

Voluntary Analytes[1]		Method Description	NELAC Method Code	NELAC Technology Code	Result	Units	Analysis Date Month/Day	USEPA Labcode[2]
	BOD	EPA 405.1	10075602		39.4	mg/L	0730	OR00011
X	CBOD	=	=		30.4	mg/L	0730	=
X	COD	EPA 410.4	10077404	401010	54.4	mg/L	0730	=
X	TOC	EPA 415.1	10078407	402010	25.3	mg/L	0820	=

[1] Voluntary analytes are analytes that you are reporting that are not listed on your permit or that are not included on the base DMRQA-24 analyte list. If you are reporting a value for a voluntary, please check the box for that analyte on this form.

[2] Indicate the seven-digit USEPA Labcode for the lab that performed the analysis for each analyte.

Reporting Forms Must Be Received By August 27, 2004. Enter Results On-line At www.nsi-es.com

USEPA DMR-QA 24

NPDES PERMITTEE DATA REPORT FORM

ENVIRONMENTAL RESOURCE ASSOCIATES® The Industry Standard™

USEPA NPDES Permit Number: OR0030589

Permit Extension:

Permittee/Facility Name and Address

Permittee Name: Wacker Siltronic Corporation

SILTRONIC CORPORATION

Facility Name (if any):

Facility Address: 7200 N.W. Front Ave.

City: Portland **State:** OR **Zip:** 97210-3676

Certification by Permit Holder or Authorized Representative

Name of Certifying Official: Tom McCue

Phone Number: 503-219-7532

Title: Environmental Manager

Fax Number: 503-219-7599

Email Address:

Mailing Address: (enter only if different from address above)

City: **State:** **Zip:**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. Each reported value was produced from a single analytical run using the analytical system that routinely performs these analyses to produce compliance monitoring data required under our National Pollutant Discharge Elimination System (NPDES) Permit. Neither I nor any of my subordinates compared our results with results from independent analyses conducted by us or another laboratory before we reported our results to the USEPA. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Jim Claxton, Environmental Eng for Tom McCue **Date Signed:** 09/02/2004

Please make corrections in boxes above

SCOEPA00023233

USEPA DMR-QA 24

IDENTIFICATION OF ALL CHEMISTRY & WET LABORATORIES

ENVIRONMENTAL RESOURCE ASSOCIATES® The Industry Standard™

USEPA NPDES Permit Number: OR0020589

Permit Extension:

Laboratory Name and Address:	USEPA Assigned Lab Code:	Lab Analysis (Put an "X" in all boxes that apply)		Lab Type (Put an "X" in the box that applies)	
		Chem	WET	In-House	Contract
Name: CH2MHILL ANALYTICAL ~~SERV~~ SVCS **Address: (line 1)** 2300 NW WALNUT BLVD **Address: (line 2)** **City:** CORVALLIS **State:** OR **Zip:** 97330-3538	ORO0004		X		X
Name: **Address: (line 1)** **Address: (line 2)** **City:** **State:** **Zip:** -					
Name: **Address: (line 1)** **Address: (line 2)** **City:** **State:** **Zip:** -					

Please make corrections in boxes above

SCOEPA00023234

ENVIRONMENTAL RESOURCE ASSOCIATES®

DMR-QA 24 Data Reporting Form

RECEIVED AUG 2 4 2004

NPDES Permit #: OR0030589

Permittee Name: Wacker Siltronic Corporation

Laboratory: CH2M Hill Analytical Svcs **USEPA Lab Code: OR00004** **Customer Number: C2086-01**

Anal. No.	Analyte	Result	Units	Method Description	Analysis Date MM/DD/YY	Report* For DMRQA
	Fathead minnow (EPA Test Code 13) - Method 1					
0754	Fathead minnow - MHSF 25° C - LC50	26.0	%	EPA 2000	07/07/04	X
	Fathead minnow (EPA Test Code 15) - Method 1					
0756	Fathead minnow - MHSF - NOEC Survival	50	%	EPA 1000	07/07/04	X
0808	Fathead minnow - MHSF - IC25 (ON) Growth	26.6	%	EPA 1000	07/07/04	X
0810	Fathead minnow - MHSF - NOEC (ON) Growth	25	%	EPA 1000	07/07/04	X
	Ceriodaphnia dubia (EPA Test Code 17) - Method 1					
0762	Ceriodaphnia - MHSF 20° C - LC50	50.6	%	EPA 2002	06/30/04	X
	Ceriodaphnia dubia (EPA Test Code 21) - Method 1					
0766	Ceriodaphnia dubia - MHSF - NOEC Survival	25	%	EPA 1002	06/29/04	X
0767	Ceriodaphnia - MHSF - IC25 Reproduction	29.2	%	EPA 1002	06/29/04	X
0768	Ceriodaphnia dubia - MHSF - NOEC Reproduction	25	%	EPA 1002	06/29/04	X

*** Permittees:**
If using for DMR-QA 24, place an "X" in the box to the right for each analyte that is required in routine NPDES monitoring and should be included in the permittee report package.

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2040
CONNECTION TEL	917208986382
CONNECTION ID	
ST. TIME	09/02 09:35
USAGE T	02'08
PGS. SENT	4
RESULT	OK

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Siltronic Corporation
7200 N.W. Front Avenue, M/S 30
Portland, OR 97210-3676, USA
Tel. 1-503-219-7313
Fax 1-503-219-7599
jim.claxton@siltronic.com

FAX

2004-September-2

To ERA-PT Group

From Jim Claxton

Fax 720-898-6382

4 Page(s) incl. coversheet

Reference DMR-QA 24 analytical results

The attached data is for Siltronic Corp., NPDES Permit # OR0030589. I have enclosed a copy of the USEPA DMR-QA 24 form and a copy of the analytical results from our contract lab.

If you have any questions, please contract me.

Jim Claxton
Environmental Engineer

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Siltronic Corporation
7200 N.W. Front Avenue, M/S 30
Portland, OR 97210-3676, USA
Tel. 1-503-219-7313
Fax 1-503-219-7599
jim.claxton@siltronic.com

FAX

2004-September-2

ER059.Jwc

To ERA-PT Group

From Jim Claxton

Fax 720-898-6382

4 Page(s) incl. coversheet

Reference DMR-QA 24 analytical results

The attached data is for Siltronic Corp., NPDES Permit # OR0030589. I have enclosed a copy of the USEPA DMR-QA 24 form and a copy of the analytical results from our contract lab.

If you have any questions, please contract me.

Jim Claxton
Environmental Engineer

Ausgabe: 2002-04

USEPA DMR-QA 24

NPDES PERMITTEE DATA REPORT FORM

ENVIRONMENTAL RESOURCE ASSOCIATES® The Industry Standard™

USEPA NPDES Permit Number: OR0030589

Permit Extension:

Permittee/Facility Name and Address

Permittee Name: Wacker Siltronic Corporation

SILTRONIC CORPORATION

Facility Name (if any):

Facility Address: 7200 N.W. Front Ave.

City: Portland **State:** OR **Zip:** 97210-3676

Certification by Permit Holder or Authorized Representative

Name of Certifying Official: Tom McCue **Phone Number:** 503-219-7532

Title: Environmental Manager **Fax Number:** 503-219-7599

Email Address:

Mailing Address: (enter only if different from address above)

City: **State:** **Zip:**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. Each reported value was produced from a single analytical run using the analytical system that routinely performs these analyses to produce compliance monitoring data required under our National Pollutant Discharge Elimination System (NPDES) Permit. Neither I nor any of my subordinates compared our results with results from independent analyses conducted by us or another laboratory before we reported our results to the USEPA. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Kim Claxton, Environmental Eng for Tom McCue **Date Signed:** 09/02/2004

Please make corrections in boxes above

SCOEPA00023238

USEPA DMR-QA 24

IDENTIFICATION OF ALL CHEMISTRY & WET LABORATORIES

ENVIRONMENTAL RESOURCE ASSOCIATES® The Industry Standard™

USEPA NPDES Permit Number: OR0030589

Permit Extension:

Laboratory Name and Address:	USEPA Assigned Lab Code:	Lab Analysis (Put an "X" in all boxes that apply)		Lab Type (Put an "X" in the box that applies)	
		Chem	WET	In-House	Contract
Name: CH2MHILL ANALYTICAL ~~SER~~ SVCS **Address: (line 1)** 2300 NW WALNUT BLVD **Address: (line 2)** **City:** CORVALLIS **State:** OR **Zip:** 97330-3538	OR00004		X		X
Name: **Address: (line 1)** **Address: (line 2)** **City:** **State:** **Zip:** -					
Name: **Address: (line 1)** **Address: (line 2)** **City:** **State:** **Zip:** -					

Please make corrections in boxes above

SCOEPA00023239

ENVIRONMENTAL RESOURCE ASSOCIATES®

DMR-QA 24 Data Reporting Form

RECEIVED AUG 24 2004

NPDES Permit #: OR0030589

Permittee Name: Wacker Siltronic Corporation

Laboratory: CH2M Hill Analytical Svcs **USEPA Lab Code: OR00004** **Customer Number: C2086-01**

Anal. No.	Analyte	Result	Units	Method Description	Analysis Date MM/DD/YY	Report* For DMRQA
	Fathead minnow (EPA Test Code 13) - Method 1					
0754	Fathead minnow - MHSF 25° C - LC50	26.0	%	EPA 2000	07/07/04	X
	Fathead minnow (EPA Test Code 15) - Method 1					
0756	Fathead minnow - MHSF - NOEC Survival	50	%	EPA 1000	07/07/04	X
0808	Fathead minnow - MHSF - IC25 (ON) Growth	26.6	%	EPA 1000	07/07/04	X
0810	Fathead minnow - MHSF - NOEC (ON) Growth	25	%	EPA 1000	07/07/04	X
	Ceriodaphnia dubia (EPA Test Code 17) - Method 1					
0762	Ceriodaphnia - MHSF 20° C - LC50	50.6	%	EPA 2002	06/30/04	X
	Ceriodaphnia dubia (EPA Test Code 21) - Method 1					
0766	Ceriodaphnia dubia - MHSF - NOEC Survival	25	%	EPA 1002	06/29/04	X
0767	Ceriodaphnia - MHSF - IC25 Reproduction	29.2	%	EPA 1002	06/29/04	X
0768	Ceriodaphnia dubia - MHSF - NOEC Reproduction	25	%	EPA 1002	06/29/04	X

*** Permittees:**
If using for DMR-QA 24, place an "X" in the box to the right for each analyte that is required in routine NPDES monitoring and should be included in the permittee report package.

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2041
CONNECTION TEL	917324941747
CONNECTION ID	
ST. TIME	09/02 11:51
USAGE T	02'22
PGS. SENT	6
RESULT	OK

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Siltronic Corporation
7200 N.W. Front Avenue, M/S 30
Portland, OR 97210-3676, USA
Tel. 1-503-219-7313
Fax 1-503-219-7599
jim.claxton@siltronic.com

FAX

2004-September-2

To SPEC Certiprep, Inc. PT Coordinator, CRM Division

From Jim Claxton

Fax 732-494-1747

6 Page(s) incl. coversheet

Reference DMR-QA 24 analytical results

The attached data is for Siltronic Corp., NPDES Permit # OR0030589. I have enclosed a copy of the analytical results from our in-house lab., EPA Lab ID OR01006.

If you have any questions, please contract me.

Jim Claxton
Environmental Engineer

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Siltronic Corporation
7200 N.W. Front Avenue, M/S 30
Portland, OR 97210-3676, USA
Tel. 1-503-219-7313
Fax 1-503-219-7599
jim.claxton@siltronic.com

FAX

2004-September-2

To SPEC Certiprep, Inc. PT Coordinator, CRM Division

ER: 058.Jwc

From Jim Claxton

Fax 732-494-1747

6 Page(s) incl. coversheet

Reference DMR-QA 24 analytical results

The attached data is for Siltronic Corp., NPDES Permit # OR0030589. I have enclosed a copy of the analytical results from our in-house lab., EPA Lab ID OR01006.

If you have any questions, please contract me.

Jim Claxton
Environmental Engineer

Update: 2002-04

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Duration: 06/02/04 - 09/03/04

MAIL OR FAX COMPLETED REPORT TO:

SPEX Certiprep, Inc.
PT Coordinator
CRM Division
203 Norcross Ave.
Metuchen, NJ 08840
FAX: 732-494-1747

IMPORTANT: SPEX CERTIPREP MUST RECEIVE YOUR COMPLETED REPORTS BY MIDNIGHT EST ON *09/03/04*

REPORT APPROVED BY:
(Laboratory Official)

(Required - Enter corrections below)

EPA LAB ID: O R Ø 1 Ø Ø 6

Name: Tom Rothschild
Title: Fac. Lab Chemist
Company Siltronic Corporation.
Address: 7200 NW Front Avenue
Portland, OR 97210-3676

Phone #: 503-219-7374
Fax #: 503-417-4144
Signature: Thomas J. Rothschild
Date: 2 Sep 2004

REPORT APPROVED BY:
(Permittee Official)

(Unless otherwise specified, the Performance Report will be sent to the person indicated below)

(Required - Enter corrections below)

PERMITTEE #: O R Ø Ø 3 Ø 5 8 9

Extension (if applicable)

Name: Tom McCue
Title: Environmental Manager
Company Siltronic Corporation
Address: 7200 NW Front Avenue
Portland, OR 97210-3676

Phone #: 503-219-7532
Fax #: 503-210-7599
Signature: Jim Clayton ENV. ENG for Tom McCue
Date: 9/2/04

PLEASE FILL IN THE FOLLOWING INFORMATION REGARDING YOUR DMRQA COORDINATOR:

Contact Name: Chris Redman
Agency: Oregon DEQ Lab Div.
Address: 1712 SW 11th Avenue
Portland, OR 97201

Phone #: 503-229-5983 x254
Fax #:

PLEASE TREAT EACH PT STUDY SAMPLE THE SAME WAY YOU WOULD TREAT A ROUTINE SAMPLE.

DO NOT REVEAL RESULTS OR ANY OTHER ASPECT OF THIS TEST TO ANY PERSON OR OTHER LABORATORY UNTIL THE TEST ROUND IS CONCLUDED.

SPEX CertiPrep and Protocol Analytical Supplies confirm that this PT Program complies with NIST Handbook 150: NVLAP Procedures and General Requirements and with NIST Handbook 150-19: Chemical Calibration – Providers of Proficiency Testing. PT materials and PT studies have been developed using the criteria in National Standards for Water Proficiency Testing Studies Criteria Document, USEPA dated December 1998.

No claims against SPEX CERTIPREP, Inc. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this product shall be greater in amount than the purchase price of the product in respect of which damages are claimed, and in no event shall SPEX CERTIPREP, Inc. be liable for any loss of profits or any incidental, special or consequential damages.

SO#: 118060-2 *CID:* 110180*1

SCOEPA00023243

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/02/04 ***Closing Date:*** 09/03/04

DMRQA NUTRIENTS (Ampule 1 of 2)

Catalog Number: PT-NUT-DMRQA(1)

Siltronic Corp.

7200 NW Front Avenue

Portland *OR* *97210*

Sales Order: 118060-2

Customer #: 110180*1

(Required - Enter corrections below)

EPA Lab Id #: OR0100006

(Required - Enter corrections below)

Permittee #: OR0030589

Extension (if applicable)

Lot #: 26-24NUT-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code (See enclosed list)*	*Method Description*	</>	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
Ammonia as N	*0031*		N/A				*MILLIGRAMS/L*	/ /
Nitrate as N	*0032*						*MILLIGRAMS/L*	/ /
Orthophosphate as P	*0033*						*MILLIGRAMS/L*	/ /

Please report the results on the diluted sample to three significant figures in mg/L.

' : VAF (Voluntary Analyte Flag) -- Mark the VAF box if this analyte is voluntary for your facility.

Authorized Signature: Thomas J. Rothschild ***Date:*** 2 Sep 2004

IMPORTANT: SPEX CertiPrep must receive your completed forms no later than *09/03/04*

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/02/04 ***Closing Date:*** 09/03/04

DMRQA NUTRIENTS (Ampule 2 of 2)

Catalog Number: PT-NUT-DMRQA(2)

Siltronic Corp.

7200 NW Front Avenue

Portland *OR* *97210*

Sales Order: 118060-2

Customer #: 110180*1

(Required - Enter corrections below)

EPA Lab Id #: O R 0 1 0 0 6

(Required - Enter corrections below)

Permittee #: O R 0 0 3 0 5 8 9

Extension (if applicable)

Lot #: 26-25NUT-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code (See enclosed list)*	*Method Description*	</>	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
Total Kjeldahl Nitrogen(TKN)	0034						MILLIGRAMS/L	/ /
Total Phosphorous	0035		2002580 3	SM4500-P E 18ED		5.20	MILLIGRAMS/L	09/02/04

Please report the results on the diluted sample to three significant figures in mg/L.

': VAF (Voluntary Analyte Flag) -- Mark the VAF box if this analyte is voluntary for your facility.

Authorized Signature: Thomas J. Rothschild ***Date:*** 2 Sep 2004

IMPORTANT: SPEX CertiPrep must receive your completed forms no later than 09/03/04

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/02/04 ***Closing Date:*** 09/03/04

DMRQA pH

Catalog Number: PT-PH-DMRQA

Siltronic Corp.

7200 NW Front Avenue

Portland OR 97210

Sales Order: 118060-2

Customer #: 110180*1

(Required - Enter corrections below)

EPA Lab Id #: O R 0 1 0 0 6

(Required - Enter corrections below)

Permittee #: O R 0 0 3 0 5 8 9

Extension (if applicable)

Lot #: 26-134PH-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code (See enclosed list)*	*Method Description*	</>	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
pH	0019		2001646 4	SM 20 ED 4500 H+ B		7.36	UNITS	09/01/04

Please report the result to three significant figures in standard units.

': VAF (Voluntary Analyte Flag) -- Mark the VAF box if this analyte is voluntary for your facility.

Authorized Signature: Thomas J. Rothschild ***Date:*** 2 Sep 2004

IMPORTANT: SPEX CertiPrep must receive your completed forms no later than 09/03/04

Lab Code: 200392-0 SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

SCOEPA00023246

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMRQA24*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/02/04 ***Closing Date:*** 09/03/04

DMRQA NON-FILTERABLE RESIDUE

Catalog Number: PT-SOL-DMRQA

Siltronic Corp.

7200 NW Front Avenue

Portland *OR* *97210*

Sales Order: 118060-2

Customer #: 110180*1

(Required - Enter corrections below)

EPA Lab Id #: ORØ1ØØ6

(Required - Enter corrections below)

Permittee #: ORØ3Ø589

Extension (if applicable)

Lot #: 26-61SOL-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code (See enclosed list)*	*Method Description*	</>	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
Non-Filterable Residue(TSS)	0072		2000480 2	SM18THED2540D		95.0	MILLIGRAMS/L	08/27/04

Please report the result on the sample to three significant figures in mg/L based on 0.5 grams of sample weight.

': VAF (Voluntary Analyte Flag) – Mark the VAF box if this analyte is voluntary for your facility.

Authorized Signature: Thomas J. Rothschild ***Date:*** 25 Sep 2004

IMPORTANT: SPEX CertiPrep must receive your completed forms no later than 09/03/04

Lab Code: 200392-0 SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

SCOEPA00023247

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

NSI Solutions, INC.
7517 Precision Drive, Suite 101
Raleigh, NC 27617
Attention: Testing Coordinator

ER: 057.JWC

2004-September-2

DMRQA-24

Dear Testing Coordinator,

I have enclosed a copy of our EPA-420 and the test result from our contract lab for chromium and BOD. At your request I have hi-lighted the analytes we require for our NPDES permit. I recorded Siltronic's NPDES number, OR0030589, on the copy of your form that was completed by our contract lab, Coffey labs.

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
DMRQA-24B data
EPA form 420

overnight mail

cc: Tom Rothschild
DMRQA-24 file

7002 2030 0003 5905 2028

STAPLE HERE

NPDES PERMITTEE DATA REPORT FORM

Form Approved. ICR No. 0280.08 Approval Expires 1/31/2007

United States Environmental Protection Agency
Laboratory DMR-QA Evaluation Study 24
Laboratory Performance Evaluation
(These data are collected under the authority of the Federal Water Pollution Control Act.)

EPA USE ONLY	
N	1
1	2

NPDES Permit Number										
O	R	0	0	3	0	5	8	9		
3	4	5	6	7	8	9	10	11		

Permit Extension	
12	13

Current Permittee Mailing Address

NPDES Permit Number: OR0030589 Phone 503-219-7532

7200 NW FRONT AVENUE

PORTLAND, OR 97210-3676

ATTENTION:
Follow the checklist on next page for instructions on completing this form and submitting data for evaluation.

Enter Permittee Name as it Should Appear in Report Heading:

S	I	L	T	R	O	N	I	C		C	O	R	P	O	R	A	T	I	O	N																	
14	15	16	17	18	19	20	21	22	24	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49		

For DMR-QA Study 23, conducted in 2003, the permittee:

Received Samples:	YES	N
	X	
	50	51

Submitted Data:	YES	NO
	X	
	52	53

Received a Report in Response:	YES	NO
	X	
	54	55

Certification by Permit Holder or Authorized Representative
(as per 40 CFR Part 122.22 - see instructions.)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Each reported value was produced from a single analytical run using the analytical system that routinely performs these analyses to produce compliance monitoring data required under our National Pollutant Discharge Elimination System (NPDES) permit. Neither I nor any of my subordinates compared our results with results from independent analyses conducted by us or any other laboratory before we reported our results to the USEPA. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title of Certifying Official (Type or Print)	Signature	Date Signed
Tom McCue Environmental Manager	Jim Clarke for Tom McCue	9/2/04

Address of Certifying Official (if different from Permittee address above.)	Telephone Number
	503-219-7532

EPA-420 (Cin), Rev. 04-00. Previous editions are obsolete.

SCOEPA00023249

United States Environmental Protection Agency
DMR-QA Study 24
Laboratory Performance Evaluation
(These data are collected under the authority of Federal Water Pollution Control Act.)

NPDES Permit Number: OR0030589

Identification of All CHEM & TOX Laboratories who did Analyses for this Permit
Permit Number:

N 2
1 2

Name	Address	Lab Code assigned by USEPA (3-9)	Lab Analysis- Put an 'X' in all that apply: Chem (10)	Tox (11)	Lab Type - choose one: F = Federal S = State G = Local Gov. C=Commercial I = Industrial O = Other (12)
Siltronic Corporation	7200 NW Front Avenue Portland, OR 97210-3676	OR01006	X		I
Coffey Laboratories,INC.	12423 NE Whitaker Way POrtland, OR 97830	OR00011	X		C
CH2MHill	2300 NW Walnut Blvd. Corvallis, OR 97330-3538	OR00004		X	C
/	/				

EPA-420 (Cin), Rev. 04-00. Previous editions are obsolete. Continued on the next page

SCOEPA00023250

RECEIVED AUG 23 2004
REC 2004

COFFEY LABORATORIES, INC.
www.coffeylabs.com
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 (503) 254-1452 (fax)

Fax

Comment: This communication consists of privileged and confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error. Please immediately notify us by telephone and return the original message to us at the below address via the U.S. Postal Service. Thank you.

To: Wacker Siltronic. **From:** RACHEDA KAADY
Fax: (503) 417 4144 **Pages:** ___ **(including cover sheet)**
Phone: (503) 219-7374 **Phone:** (503) 254-1794.
Date: 08/23/04 **Email:** _____

RE: DMRQA 24B Results.

[ ] Quote [ ] Please Reply [ ] Please Comment [ ] Urgent

Please find attached the DMRQA 24/NSI Results for the analyses of BOD & Cr.

Thank you for allowing Coffey Laboratories to be of service to you.

"Calibrated for Success"
...since 1978

Rachida Kaady

DOC NSI-36
Revision WP-095/DMRQA-24B

NSI WATER POLLUTION LABORATORY PERFORMANCE EVALUATION
STUDY WP-095/DMRQA-24B

NVLAP LAB CODE# 200440-0

(1) NSI LAB CODE: N04395

(2) EVALUATE AS (CHOOSE ONE OR BOTH): ☒ **WP-095** ☐ **DMRQA-24B (PERMITTEES ONLY)**

COFFEY LABORATORIES, INC.
COMPANY NAME

RACHEDA KAADY
ATTENTION

(503) 254-1794 ex 214
PHONE NUMBER

12423 NE Whitaker Way
MAILING ADDRESS FOR REPORT

Portland
CITY

OR
STATE

97230
ZIP CODE

(3) REPORT EVALUATION RESULTS FOR WP-095 TO:

☐ Report Only To Laboratory ☒ Report To Accreditation Agency

ORELAP ID, State Lab Code: OR100028 **(If Available)**

US EPA Labcode: OR00011 **(Required)**

Primary Accreditation Agency Address:

Agency ORELAP / Public Health Laboratory

Attention Dr. Irene Rosning

Address 1717 SW 10th Ave

City/State/Zipcode Portland, OR 97201

For additional agencies see last page of this packet

(4) REPORT MY EVALUATION FOR DMRQA-24:

NPDES Permit Number OR0030589 **(Required for DMRQA-24)**

DMRQA-24 results will be submitted to the appropriate state coordinator and USEPA by the EPA deadline.

SEND COMPLETED FORMS TO:

NSI SOLUTIONS, INC.
7517 PRECISION DRIVE, SUITE 101
RALEIGH, NC 27617
ATTENTION: TESTING COORDINATOR

OR

ENTER YOUR RESULTS ON-LINE AT WWW.NSI-ES.COM

As a participant in this NSI Water Pollution Study, I affirm that we have abided by the following conditions of this study. 1) We have not sent test samples to any other laboratory for analysis. 2) We have not knowingly received test samples from another laboratory for analysis. 3) We have not attempted to obtain or provide other laboratories with any information about the target values or acceptance ranges of the test samples from NSI.

APPROVED BY: Racheda Kaady _____ _____

(503) 254-1794 TELEPHONE | RACHEDA KAADY (PRINT NAME HERE) | SIGNATURE | DATE | E-MAIL

QA Director
TITLE

Report Forms Must Be Received By August 27, 2004. No Faxes Can Be Accepted.

P.5
5032541452
Coffey Labs
Aug 23 04 10:57a

STUDY TYPE: WPCHEM/DMRQA CHEM

STUDY NUMBER: WP-095/DMRQA-24B

NSI LABCODE: N04395

PEI-034-1 TRACE METALS LOT# 079

*** NELAC Method Code and NELAC Technology Code Are Not Required For DMRQA-24 Reporting Purposes**

Voluntary Analytes[1]		Method Description	NELAC Method Code	NELAC Technology Code	Result	Units	Analysis Date Month/Day	USEPA Labcode[2]
X	Aluminum	EPA 200.8	1001460 5	102010	2318	ug/L	0812	ORQ00111
X	Antimony	"	"	"	606	ug/L	"	"
X	Arsenic	"	"	"	165	ug/L	"	"
X	Barium	"	"	"	302	ug/L	"	"
X	Beryllium	"	"	"	850	ug/L	"	"
X	Cadmium	"	"	"	331	ug/L	"	"
X	Chromium	"	"	"	498	ug/L	"	"
X	Cobalt	"	"	"	504	ug/L	"	"
X	Copper	"	"	"	401	ug/L	"	"
X	Iron	"	"	"	1038	ug/L	"	"

[1] Voluntary analytes are analytes that you are reporting that are not listed on your permit or that are not included on the base DMRQA-24 analyte list. If you are reporting a value for a voluntary, please check the box for that analyte on this form.

[2] Indicate the seven-digit USEPA Labcode for the lab that performed the analysis for each analyte.

Reporting Forms Must Be Received By August 27, 2004 Enter Results On-line At www.nsi-sc.com

p.4
5032541452
Coffey Labs
Aug 23 04 10:57a

STUDY TYPE: WPCHEM/DMRQA CHEM
STUDY NUMBER: WP-095/DMRQA-24B

NSI LABCODE: N04395

PEI-034-1 TRACE METALS LOT# 079

*** NELAC Method Code and NELAC Technology Code Are Not Required For DMRQA-24 Reporting Purposes**

Voluntary Analytes[1]		Method Description	NELAC Method Code	NELAC Technology Code	Result	Units	Analysis Date Month/Day	USEPA Labcode[2]
X	Aluminum	EPA 200.7	10013602	102015	2107	ug/L	0817	OK000 11
X	Antimony	EPA 204.2	10017604	101020	578	ug/L	0817	
X	Arsenic	EPA 206.2	10018403	101020		ug/L	08	
X	Barium	EPA 200.7	10013602	102015	294	ug/L	0817	
X	Beryllium	=	=	=	830	ug/L	0817	
X	Cadmium	=	=	=	325	ug/L	0820	
	Chromium	EPA 218.2	10026207	101020	530	ug/L	0818	
X	Cobalt	EPA 200.7	10013602	102015	504	ug/L	0817	
X	Copper	=	=	=	405	ug/L	0817	
X	Iron	=	=	=	930	ug/L	0817	

[1] Voluntary analytes are analytes that you are reporting that are not listed on your permit or that are not included on the base DMRQA-24 analyte list. If you are reporting a value for a voluntary, please check the box for that analyte on this form.

[2] Indicate the seven-digit USEPA Labcode for the lab that performed the analysis for each analyte.

Reporting Forms Must Be Received By August 27, 2004. Enter Results On-line At www.nsi-es.com.

STUDY TYPE: WPCHEM/DMRQA CHEM

STUDY NUMBER: WP-095/DMRQA-24B

NSI LABCODE: N04395

p.3 5032541452 Aug 23 04 10:56a Coffey Labs

PEI-026 DEMAND LOT# 079

* NELAC Method Code and NELAC Technology Code Are Not Required For DMRQA-24 Reporting Purposes

Voluntary Analytes[1]		Method Description	NELAC Method Code	NELAC Technology Code	Result	Units	Analysis Date Month/Day	USEPA Labcode[2]
☐	BOD	EPA 405.1	10075602		39.4	mg/L	0730	QR000 11
☒	CBOD	=	=		30.4	mg/L	0730	=
☒	COD	EPA 410.4	10077404	401010	54.4	mg/L	0730	=
☒	TOC	EPA 415.1	10078407	402010	25.3	mg/L	0820	=

[1] Voluntary analytes are analytes that you are reporting that are not listed on your permit or that are not included on the base DMRQA-24 analyte list. If you are reporting a value for a voluntary, please check the box for that analyte on this form.

[2] Indicate the seven-digit USEPA Labcode for the lab that performed the analysis for each analyte.

Reporting Forms Must Be Received By August 27, 2004. Enter Results On-line At www.nsi-es.com.

EROSS: MB

Pounds Report

Use this form to report toxic substance use for Reporting Year 2003. Refer to the fact sheet "Oregon's Toxics Use Reduction and Hazardous Waste Reduction (TUHWR) Act", TUHWR Questions Answers, and to the TUHWR Act and regulations for reporting requirements. You may make copies of this form if you have more than four chemicals to report

State of Oregon Department of Environmental Quality

Toxics Use/Waste Reduction Assistance Program
811 SW 6th Avenue
Portland, OR 97204
Phone: (503)229-5181
Fax: (503)229-6977
Contact: David Livengood
www.deq.state.or.us/wmc/tuwrap

Name of Company: WACKER SILTRONIC CORPORATION

Physical Address: 7200 NW FRONT AVE, PORTLAND, OR 97210

Mailing Address: WACKER SILTRONIC CORP , 7200 NW FRONT AVE, PORTLAND, OR 97210-3676

Contact Person: MYRON BURR Title: Environmental Engineer

Phone Number: 503 219-7832 E-Mail Address: myron_burr@siltronic.com

TRI ID#: 97210WCKRS7200N DEQ ID#: ORD096253737

Chemical: Nitric Acid CAS #: 7697-37-2

Pounds Used: 863,320 Other Information:

Chemical: Hydrochloric Acid CAS #: 7647-01-0

Pounds Used: 389,679 Other Information:

Chemical: Hydrogen Fluoride CAS #: 7664-39-3

Pounds Used: 140,275 Other Information:

Chemical: Sulfuric Acid CAS #: 7664-93-9

Pounds Used: 30,829 Other Information:

I certify that the information above is correct.

Name of Senior Manager or Business Owne: Thomas C. McCue

Signature: Thomas C McCue Date 8/17/04

Return by September 1, 2004 to: DEQ - HWPPD - TU/WRAP
811 SW Sixth Avenue
Portland, OR 97204

SCOEPA00023256

Pounds Report

Use this form to report toxic substance use for Reporting Year 2003. Refer to the fact sheet "Oregon's Toxics Use Reduction and Hazardous Waste Reduction (TUHWR) Act", TUHWR Questions Answers, and to the TUHWR Act and regulations for reporting requirements. You may make copies of this form if you have more than four chemicals to report

State of Oregon
Department of
Environmental
Quality

Toxics Use/Waste
Reduction Assistance
Program
811 SW 6th Avenue
Portland, OR 97204
Phone: (503)229-5181
Fax: (503)229-6977
Contact: David Livengood
www.deq.state.or.us/
wmc/tuwrap

Name of Company: WACKER SILTRONIC CORPORATION

Physical Address: 7200 NW FRONT AVE, PORTLAND, OR 97210

Mailing Address: WACKER SILTRONIC CORP , 7200 NW FRONT AVE, PORTLAND, OR 97210-3676

Contact Person: MYRON BURR Title: Environmental Engineer

Phone Number: 503 219-7832 E-Mail Address: myron_burr@siltronic.com

TRI ID#: 97210WCKRS7200N DEQ ID#: ORD096253737

Chemical: Ammonia CAS #: 7664-41-7

Pounds Used: 36,862 Other Information: _____

Chemical: _____ CAS #: _____

Pounds Used: _____ Other Information: _____

Chemical: _____ CAS #: _____

Pounds Used: _____ Other Information: _____

Chemical: _____ CAS #: _____

Pounds Used: _____ Other Information: _____

Chemical: _____ CAS #: _____

Pounds Used: _____ Other Information: _____

I certify that the information above is correct.

Name of Senior Manager or Business Owne Thomas C. McCue

Signature: Thomas C. McCue Date 8/17/04

Return by September 1, 2004 to:

DEQ - HWPPD - TU/WRAP
811 SW Sixth Avenue
Portland, OR 97204

SCOEPA00023257

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: [redacted]nic Corporation Site ID 93450
ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-10) PERMIT NUMBER	(11-15) DISCHARGE NUMBER
101128	Outfall 001

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2004	7	1	TO	2004	7	31

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	3,056	3,524	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--			totalizing recorder	
BOD	SAMPLE MEASUREMENT	8.8	25.1	Kg/day	--	2.9	8.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	154	342		--	15	30				
TSS	SAMPLE MEASUREMENT	2.0	4.3	Kg/day	--	0.7	1.3	mg/l		1/7	24HC
	PERMIT REQUIREMENT	236	695		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			Kg/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.05	0.12		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.004	<0.004	Kg/day	--	<0.001	<0.001	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	20.9	27.0	Kg/day	--	7.0	8.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	178	365		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	10	15				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years).

Siltronic Corp. by:
J Clayton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 8 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site. 7/15: Outage for 4 mins 25 sec @ 5.87 pH

ER053

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-4 WHICH MAY NOT BE USED.) PAGE OF

SCOEPA00023258

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Siltronic Corporation Site ID 93450

ADDRESS 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	7	1	TO	2004	7	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	Kg/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
Turbidity	SAMPLE MEASUREMENT					3.2	7.5	NTC		6/1	Grab
	PERMIT REQUIREMENT									One sample every 4 hours	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Siltronic Corp. by:
J Claston

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	04	8	9
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023259

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Siltronic Corporation Site ID 93450
ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	7	1	TO	2004	7	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	410	1,177	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	10	15				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years).

Siltronic Corp. by:
J Clasen
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 8 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023260

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Siltronic Corporation Site ID 93450
ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676
FACILITY
LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	7	1	TO	2004	7	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	3,466	4,550	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	79.2	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	5.87	7.15	8.26			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		Siltronic Corp. by:	TELEPHONE		DATE		
Tom McCue Environmental Manager	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)	J Clayton	503	243-2020	04	8	9
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023261

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER: 052.JWC

2004-August-10

July 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the July 2004 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
POTW-IDR

cc: Tom Rothschild
POTW-IDR File

7002 2030 0003 5905 2028

4640175004
SUSC SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

7/31/2004

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	118,592	(100s of GALLONS)
CURRENT READING	109367	912,442	(100s of GALLONS)
CONSUMPTION	0	206,150	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	2,061,500	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	2,061,500	* 10 GAL / 7.48 GAL/CF =	2,756,016 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,756,016 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	617,550	(10s of GALLONS)
CURRENT READING	690,851	(10s of GALLONS)
CONSUMPTION	73,301	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	73,301	* 10 GAL / 7.48 GAL/CF=	97,996 CF

This meter reading was reported by: C. Justin Darr on 8/4/04 (date)

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023263

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: August 15TH

SAMPLING PERIOD: July 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received

Date Entered

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: J Claxton Date: 8/10/04

N:\Environmental\Enviromental Affairs\Enviromental-NPDES\PERMITS\WATER\POTW\2004 reports\July04.doc

SCOEPA00023264

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Wesley McDaniel
City of Portland
Industrial Stormwater Program
6543 N Burlington Avenue
Portland, Oregon 97203-5452

ER: 049.JWC

2004-07-13

Annual Stormwater monitoring data for July 1, 2003 to June 30, 2004

Dear Mr. McDaniel,

I have enclosed the stormwater monitoring data as required by Siltronic's NPDES Stormwater Discharge Permit number 1200-Z issued October 1, 2002. Sampling was conducted November 18, 2003 and May 26, 2004 meeting the requirement of conducting two monitoring events per sample point between July 1, 2003 and June 30, 2004.

All parameters were below benchmarks with the exception of the TSS sample taken May 26, 2004 at the North sample point. The TSS was 142 mg/L and the benchmark is 130 mg/L. Another sample could not be taken to confirm this result because of lack of rain.

We have reviewed the Stormwater Pollution Control Plan and feel that no changes are required at this time. We believe that the difficulties in collecting a sample at the North site are the reason for the high TSS value.

Sampling at the North sample site is difficult. Siltronic staff has had problems at this sample point in the past. For water year 2004-2005 the following changes are being considered:

1. Change sample date to earlier in the year. The samples from the North site are collected by "dipping" for sample in an 18" diameter pipe using a 6-foot pole with a collection cup at the end. In May the stormwater level in the pipe is very low making the collection of sample very difficult without "stirring up" the catch basin sediments. Reviewing TSS sample data from the North site for November shows that since 1997, samples taken in November have measured from 4 to 27 mg/L TSS. The historical average rainfall for November is 5" (136mm). The historical average rainfall for May is 2" (52mm). The volume of rainwater passing though the system is much greater in November. February and March historically average 4" (90mm). So we are considering changing our sampling to February or March. This should provide the increased sample flow and depth to improve sampling.

siltronic
perfect silicon solutions

2. Change sampling technique: The current sampling method is difficult. We are looking at installing a sampling pipe in the North site that can be connected to a pump. The level of water at the sample point may still be a problem in May, but it may be less problematic in February or March

3. Change the sample point. There might be another point that could reduce the sampling difficulties. We are investigating a new sample point.

A summary of the results for 2003-2004 are listed in the following table:

PARAMETER	Sample date	North results	South results	East results	BENCH MARK	Units	Detection limit	Method & Comments
Copper	11/18/2003	0.03	<0.03	0.04	0.1	mg/L	0.03	EPA 200.7
	5/26/2004	**0.07**	**0.05**	**<0.03**				
Lead	11/18/2003	<0.005	<0.005	<0.005	0.4	mg/L	0.005	EPA 239.2
	5/26/2004	**0.018**	**<0.005**	**<0.005**				
Zinc	11/18/2003	0.24	0.08	0.33	0.6	mg/L	0.05	EPA 200.7
	5/26/2004	**0.47**	**0.40**	**0.35**				
pH	11/18/2003	6.5	7.3	6.5	5.5-9	pH units	0.1	Standards Methods 1998, 20th ed, Section 4500-H^+
	5/26/2004	**6.2**	**6.1**	**6.4**				
TSS	11/18/2003	23	4	12	130	mg/L	0.1	Standards Methods 1998, 20th ed, Section 2540 D
	5/26/2004	**142**	**28**	**4**				
Oil and Grease	11/18/2003	<3.0	<3.0	<3.0	10	mg/L	3	EPA 1664
	5/26/2004	**<3.0**	**<3.0**	**<3.0**				

If you have any questions or comments, please contact me at 503-219-7313.

Best regards,

Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	November 18, 20 , 2003	
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE: 11-18-03	11-18-03	11-20-03
			North	East	South
Total Copper	0.1	mg/L	0.03	0.04	<0.03
Total Lead	0.4	mg/L	<0.005	~~<0.005 0.33~~	<0.005
Total Zinc	0.6	mg/L	0.24	0.33	0.08
pH	5.5-9	Su	6.5	6.3	7.3
TSS	130	mg/L	23	~~24~~ 12 11 3.9	~~5.75~~
Oil and Grease	10	mg/L	<3.0	<3.0	<3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

(1) SJR 12 Jul 2004

SCOEPA00023267

RECEIVED DEC 15 2003

Report Date: December 9, 2003
Job Number: A31120AS
PO Number: 4500075102
Project No: None Provided
Project Name: Stormwater Fall 2003

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 11/20/03 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A31120AS-1	03-131-SW-N	Storm Water	11/18/03	1345
A31120AS-2	03-133-SW-E	Storm Water	11/18/03	1505

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

John A. Guild

Technical Services

TS /atc

SCOEPA00023268

Analytical Data

Wacker Siltronic

Job Number: A31120AS

Lab Sample ID: A31120AS-1
Field ID: 03-131-SW-N NORTH
Date/Time: 11/18/03 1345
Matrix: Storm Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L
Copper	EPA 200.7	0.03	0.03	mg/L
Zinc	EPA 200.7	0.05	0.24	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

SCOEPA00023269

Analytical Data

Wacker Siltronic

Job Number: A31120AS

Lab Sample ID: A31120AS-2
Field ID: 03-133-SW-E
Date/Time: 11/18/03 1505
Matrix: Storm Water

EAST

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L
Copper	EPA 200.7	0.03	0.04	mg/L
Zinc	EPA 200.7	0.05	0.33	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

SCOEPA00023270

Report Date: 12/18/2003
Job Number: A31121AR
PWSID:
PO Number: 4500075102
Project No.: None Provided
Project Name: Storm Water Fall 2003

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210

Sample Information

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A31121AR-1	03-132-SW-S	Waste Water	11/20/2003	1410

Analytical results are on the following page(s).

Sincerely,

Technical Services

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

TS/atc

Sample Identification

Lab Sample ID#: A31121AR-1 03-132-SW-S South

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	ND mg/L	EPA 200.7	0.03 mg/L	MAJ
Lead	ND mg/L	EPA 239.2	0.005 mg/L	CV
Total Oil & Grease	ND mg/L	EPA 1664	3. mg/L	NAC
Zinc	0.08 mg/L	EPA 200.7	0.05 mg/L	MAJ

ND means none detected at or above the detection limit listed.

SCOEPA00023272

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 11·19·03 Oven Temp: 104 C Analyst: Di

Date In: ~~11·19~~ 11·20·03 Di Time In/Out: 1115 / 1300

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank		0.0870	0.0870	
6	03-131-W	500	0.0993	0.0881	Di ~~112~~ 22.4
7	03-131-W	500	0.0995	0.0877	Di ~~118~~ 23.6
				Average TSS	Di ~~115~~ 23
8	03-133-E	200	0.0892	0.0870	~~22~~ 11
9	03-133-E	200	0.0904	0.0878	~~26~~ 13
				Average TSS	~~24~~ 12
10	① 03-132-S	500	0.0894	0.0877	~~17~~ 3.4
11	03-132-S	500	0.0898	0.0876	~~22~~ 4.4
				Average TSS	~~19.5~~ 3.9

JDR 12 Jul 20

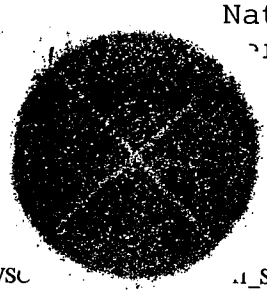
Notes: Storm Water Samples.

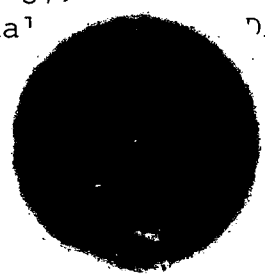
① 03-132-S was sampled on 11/20/03.

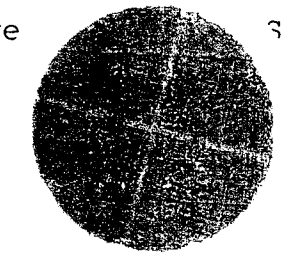
Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
National Discharge System
ermit







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North East South

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon 97210
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: Storm Water FAll 2003
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: Di

FOR LABORATORY USE ONLY Page of
Job Number:
Custabb:
VISA M/C Cardholder:
Card # Exp:
Cash/Check/CC $
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc	ID	#	Collection Date	Collection Time	Media	Analysis Requested	Test Prof
03-132-SW-S				11.20.03	1410		Oil+Grease (EPA 1664) Cu, Pb, Zn (EPA 200.8)	

Sampled By: Tom Rothschild, Koreen Lail
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 11/21/03

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Irish	11/21/03	1115	Kate Williams	11-21-03	1115
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023274

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
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Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon 97210
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: Storm Water - Fall 2003
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: DR

FOR LABORATORY USE ONLY — Page ___ of ___
Job Number:
CusLabbr: NEW
VISA MC Cardholder:
Card #: Exp
Cash / Check / COD $
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Lab	ID	Collection Date	Time	Media	Analysis Requested	Test Profile
03-131-SW-N			11.18.03	1345		Oil & Grease (1664) Cu, Pb, Zn (200.8)	
~~03-132-SW-S~~ D'						~~Oil & Grease (1664) Cu, Pb, Zn (200.8)~~ D'	
03-133-SW-E			11.18.03	1505		Oil & Grease (1664) Cu, Pb, Zn (200.8	

Sampled By: Dianne Lush
AUTHORIZED CUSTOMER SIGNATURE: Dianne Lush DATE: 11/20/03

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Lush	11/20/03	1120	Peter Williams	11-2003	1120
				LAB		

White Copy-Laboratory Yellow Copy - Customer

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SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

Siltronic Corporation Storm Water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	5/26/04	DI
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:	5/26/04	DI
			North	East	South
Total Copper	0.1	mg/L	0.07	<0.03	0.05
Total Lead	0.4	mg/L	0.018	<0.005	<0.005
Total Zinc	0.6	mg/L	0.47	0.35	0.4
PH	5.5-9	Su	6.17	6.43	6.13
TSS	130	mg/L	142.25 ①	4	28
Oil and Grease	10	mg/L	<3	<3	<3

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

① will resample asap. DI

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5/26/04 Oven Temp: 104 C Analyst: Di

Date In: 5/26/04 Time In/Out: 1500 / 0915 (5/27/04

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L	
1	Blank		0.0888	0.0888		
2	04-28-N	200	0.1172	0.0883	144.5 ✓	
3	04-28-N	200	0.1165	0.0885	140 ✓	
				Average TSS	142.25 ✓	NORTH
4	04-29-E	200	0.0904	0.0896	4 ✓	
5	04-29-E	200	0.0898	0.0890	4 ✓	
				Average TSS	4 ✓	EAST
7	04-30-S	200	0.0939	0.0883	28 ✓	
8	04-30-S	200	0.0927	0.0871	28 ✓	
				Average TSS	28 ✓	SOUTH

Notes: Storm Water Samples

Cal mg/L g - Tare Wt
Sample,

No m /L, dai
dai

Refer andard Me e Examinati d
Wastewater, n Edition, Sect. ,
page 2-57.

2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2003 Revised

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RECEIVED JUN 18 2004

Report Date: June 14, 2004
Job Number: A40527N
PO Number: 4500075102
Project No: 28-29-30
Project Name: Stormwater Spring 2004

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 05/27/04 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A40527N-1	04-28-SW-N	Stormwater	05/26/04	1435
A40527N-2	04-29-SW-E	Stormwater	05/26/04	1515
A40527N-3	04-30-SW-S	Stormwater	05/26/04	1445

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Technical Services

TS /atc

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023278

Analytical Data

Wacker Siltronic

Job Number: A40527N

Lab Sample ID: A40527N-1
Field ID: 04-28-SW-N
Date/Time: 05/26/04 1435
Matrix: Storm Water

NORTH

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	0.07	mg/L
Zinc	EPA 200.7	0.05	0.47	mg/L
Lead	EPA 239.2	0.005	0.018	mg/L

ND means none detected at or above the detection limit listed.

SCOEPA00023279

Analytical Data

Wacker Siltronic

Job Number: A40527N

Lab Sample ID: A40527N-2
Field ID: 04-29-SW-E
Date/Time: 05/26/04 1515
Matrix: Storm Water

EAST

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.35	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023280

Analytical Data

Wacker Siltronic

Job Number: A40527N
Page Number: 4 of 4

Lab Sample ID: A40527N-3
Field ID: 04-30-SW-S
Date/Time: 05/26/04 1445
Matrix: Storm Water

SOUTH

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	0.05	mg/L
Zinc	EPA 200.7	0.05	0.4	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
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Redmond, OR 97756
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CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Siltronic
Mailing Address: 7200 NW Front Ave
Portland, Oregon
Phone: (503) 219-7274 FAX: (503) 417-4141

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 28-29-30
Project Name: Stormwater-Spring-2004
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: DI

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

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Job Number
Custabb NEW
VISA M/C Cardholder
Card # Exp
Cash Check CC$
Billing Code 1 2 3 4
QC LEVEL 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc	ID	#	Collection Date	Collection Time	Media	Analysis Requested	Test Profile
04-28-SW-N				5/26/04	1435		Oil+Grease-1664, Cu, Pb, Zn 200.8	
04-29-SW-E				5/26/04	1515		"	
04-30-SW-S				5/26/04	1445		"	

Sampled By: Tom Rothschild + Frank Thrasher
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 5/27/04

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Irish	5/27/04	1030	[signature]	5-27-04	1030

'te Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

'BMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR RVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023282

Industrial Source Control Division

INDUSTRIAL STORMWATER

NPDES 1200-Z MONITORING REPORT

Industry Name: **SILTRONIC CORP**

Site Address: **7200 NW FRONT AVE, PORTLAND, OR**

The permittee shall monitor stormwater **twice** per year for the parameters outlined in their NPDES 1200-Z Stormwater Discharge Permit Schedule B.1.a., and submit results to the City as stated in Schedule D.2.

Stormwater samples were taken for the above permittee, on these days and at these sample points:

Sample Date(s)	Sample Point(s)
11/18/03	NORTH & EAST
11/20/03	SOUTH
5/26/04	NORTH, EAST & SOUTH

The permittee shall submit by **July 15** of each year a copy of the **laboratory analysis reports**, which show analytical methods and detection limits, for stormwater samples collected for the previous monitoring year (July 1-June 30).

❑ **Monitoring Waiver Reduction Notification**:
Check the box if your facility is exercising a waiver of monitoring based on meeting benchmarks listed in Schedule A.9., AND site conditions have not changed to impact stormwater run-off. Note: This does not exclude your facility from notifying DEQ about the waiver of monitoring. Please read Schedule B of the permit to clearly understand the monitor waiver reduction guidelines. If waiver request is for select pollutants, list the parameters excluded from monitoring: _____.

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

Signature: Jim Claxton

Title: ENVIRONMENTAL ENGINEER

Date: 7/13/04

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Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Mr. Dennis Jurries
Oregon Department of Environmental Quality
Northwest Water Quality Division
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

ER: 048.JWC

2004-07-13

Annual Stormwater monitoring data for July 1, 2003 to June 30, 2004

Dear Mr. Jurries,

I have enclosed the stormwater monitoring data as required by Siltronic's NPDES Stormwater Discharge Permit number 1200-Z issued October 1, 2002. Sampling was conducted November 18, 2003 and May 26, 2004 meeting the requirement of conducting two monitoring events per sample point between July 1, 2003 and June 30, 2004.

All parameters were below benchmarks with the exception of the TSS sample taken May 26, 2004 at the North sample point. The TSS was 142 mg/L and the benchmark is 130 mg/L. Another sample could not be taken to confirm this result because of lack of rain.

We have reviewed the Stormwater Pollution Control Plan and feel that no changes are required at this time. We believe that the difficulties in collecting a sample at the North site are the reason for the high TSS value.

Sampling at the North sample site is difficult. Siltronic staff has had problems at this sample point in the past. For water year 2004-2005 the following changes are being considered:

1. Change sample date to earlier in the year. The samples from the North site are collected by "dipping" for sample in an 18" diameter pipe using a 6-foot pole with a collection cup at the end. In May the stormwater level in the pipe is very low making the collection of sample very difficult without "stirring up" the catch basin sediments. Reviewing TSS sample data from the North site for November shows that since 1997, samples taken in November have measured from 4 to 27 mg/L TSS. The historical average rainfall for November is 5" (136mm). The historical average rainfall for May is 2" (52mm). The volume of rainwater passing though the system is much greater in November. February and March historically average 4" (90mm). So we are considering changing our sampling to February or March. This should provide the increased sample flow and depth to improve sampling.

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2. Change sampling technique: The current sampling method is difficult. We are looking at installing a sampling pipe in the North site that can be connected to a pump. The level of water at the sample point may still be a problem in May, but it may be less problematic in February or March

3. Change the sample point. There might be another point that could reduce the sampling difficulties. We are investigating a new sample point.

A summary of the results for 2003-2004 are listed in the following table:

PARAMETER	Sample date	North results	South results	East results	BENCH MARK	Units	Detection limit	Method & Comments
Copper	11/18/2003	0.03	<0.03	0.04	0.1	mg/L	0.03	EPA 200.7
	5/26/2004	**0.07**	**0.05**	**<0.03**				
Lead	11/18/2003	<0.005	<0.005	<0.005	0.4	mg/L	0.005	EPA 239.2
	5/26/2004	**0.018**	**<0.005**	**<0.005**				
Zinc	11/18/2003	0.24	0.08	0.33	0.6	mg/L	0.05	EPA 200.7
	5/26/2004	**0.47**	**0.40**	**0.35**				
pH	11/18/2003	6.5	7.3	6.5	5.5-9	pH units	0.1	Standards Methods 1998, 20th ed, Section 4500-H^+
	5/26/2004	**6.2**	**6.1**	**6.4**				
TSS	11/18/2003	23	4	12	130	mg/L	0.1	Standards Methods 1998, 20th ed, Section 2540 D
	5/26/2004	**142**	**28**	**4**				
Oil and Grease	11/18/2003	<3.0	<3.0	<3.0	10	mg/L	3	EPA 1664
	5/26/2004	**<3.0**	**<3.0**	**<3.0**				

If you have any questions or comments, please contact me at 503-219-7313.

Best regards,

Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Industrial Source Control Division

INDUSTRIAL STORMWATER

NPDES 1200-Z MONITORING REPORT

Industry Name: **SILTRONIC CORP**

Site Address: **7200 NW FRONT AVE, PORTLAND, OR**

The permittee shall monitor stormwater **twice** per year for the parameters outlined in their NPDES 1200-Z Stormwater Discharge Permit Schedule B.1.a., and submit results to the City as stated in Schedule D.2.

Stormwater samples were taken for the above permittee, on these days and at these sample points:

Sample Date(s)	Sample Point(s)
November 18, 2003	North, South and East
May 26, 2004	North, South and East

The permittee shall submit by **July 15** of each year a copy of the **laboratory analysis reports**, which show analytical methods and detection limits, for stormwater samples collected for the previous monitoring year (July 1-June 30).

☐ **Monitoring Waiver Reduction Notification:**
Check the box if your facility is exercising a waiver of monitoring based on meeting benchmarks listed in Schedule A.9., AND site conditions have not changed to impact stormwater run-off. Note: This does not exclude your facility from notifying DEQ about the waiver of monitoring. Please read Schedule B of the permit to clearly understand the monitor waiver reduction guidelines. If waiver request is for select pollutants, list the parameters excluded from monitoring: _____.

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

Signature: Kim Clarke

Title: ENVIRONMENTAL ENGINEER

Date: 7/12/04

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	July 31st, 2003	Di
			North	East	South
Floating Solids	No visible discharge	Yes or No	No Rain	No Rain	No Rain
Oil and Grease Sheen*	No visible sheen	Yes or No	No Rain	No Rain	No Rain

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
pH	5.5-9	Su			
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE: August 31st 2003		
			North	East	South
Floating Solids	No visible discharge	Yes or No	No Rain	No Rain	No Rain
Oil and Grease Sheen*	No visible sheen	Yes or No	No Rain	No Rain	No Rain

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
pH	5.5-9	Su			
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	9/15/03	DI
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
pH	5.5-9	Su			
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	10-15-03	
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
pH	5.5-9	Su			
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	November 18, 20, 2003	
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE: 11-18-03	11-18-03	11-20-03
			North	East	South
Total Copper	0.1	mg/L	0.03	0.04	<0.03
Total Lead	0.4	mg/L	<0.005	~~<0.005~~ ~~0.3~~ 3.0[1]	<0.005
Total Zinc	0.6	mg/L	0.24	0.33	0.08
pH	5.5-9	Su	6.5	6.3	7.3
TSS	130	mg/L	23	~~29~~ 12 (1) 3.9	~~5.72~~
Oil and Grease	10	mg/L	<3.0	<3.0	<3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

(1) SJR 12 Jul 2004

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	12-30-03 DT	
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
pH	5.5-9	Su			
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	1.30.04	D1
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
pH	5.5-9	Su			
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	2/24/04	Di
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:	2/24/04	
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
pH	5.5-9	Su	6.00		
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Siltronic Corporation Storm Water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	3-24-04	D1
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
PH	5.5-9	Su			
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

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Siltronic Corporation Storm Water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE: April 2004		
			North	East	South
Floating Solids	No visible discharge	Yes or No	no rainfall ①		
Oil and Grease Sheen*	No visible sheen	Yes or No	no rainfall ①		

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

STORM WATER SAMPLING – Semiannual: ① no rainfall coincided with personel availability DT

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
PH	5.5-9	Su			
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

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Siltronic Corporation Storm Water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	5/26/04	DI
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:	5/26/04	DI
			North	East	South
Total Copper	0.1	mg/L	0.07	<0.03	0.05
Total Lead	0.4	mg/L	0.018	<0.005	<0.005
Total Zinc	0.6	mg/L	0.47	0.35	0.4
PH	5.5-9	Su	6.17	6.43	6.13
TSS	130	mg/L	142.25 ①	4	28
Oil and Grease	10	mg/L	<3	<3	<3

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

① will resample asap. DI

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Siltronic Corporation Storm Water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	30 Jun	2004
			North	East	South
Floating Solids	No visible discharge	Yes or No	Insufficient		
Oil and Grease Sheen*	No visible sheen	Yes or No	Rainfall		3JR

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	East	South
Total Copper	0.1	mg/L			
Total Lead	0.4	mg/L			
Total Zinc	0.6	mg/L			
PH	5.5-9	Su			
TSS	130	mg/L			
Oil and Grease	10	mg/L			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

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Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	November 18, 20	2003
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE: 11-18-03	11-18-03	11-20-03
			North	East	South
Total Copper	0.1	mg/L	0.03	0.04	<0.03
Total Lead	0.4	mg/L	<0.005	~~<0.005 0.3 D~~	<0.005
Total Zinc	0.6	mg/L	0.24	0.33	0.08
pH	5.5-9	Su	6.5	6.3	7.3
TSS	130	mg/L	23	~~29~~ 12 11 3.9	~~572~~
Oil and Grease	10	mg/L	<3.0	<3.0	<3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

(1) 3gR 12 Jul 2004

SCOEPA00023299

RECEIVED DEC 15 2003

Report Date: December 9, 2003
Job Number: A31120AS
PO Number: 4500075102
Project No: None Provided
Project Name: Stormwater Fall 2003

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 11/20/03 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A31120AS-1	03-131-SW-N	Storm Water	11/18/03	1345
A31120AS-2	03-133-SW-E	Storm Water	11/18/03	1505

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

John A. Guild

Technical Services

TS /atc

SCOEPA00023300

Analytical Data

Wacker Siltronic

Job Number: A31120AS

Lab Sample ID: A31120AS-1
Field ID: 03-131-SW-N NORTH
Date/Time: 11/18/03 1345
Matrix: Storm Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L
Copper	EPA 200.7	0.03	0.03	mg/L
Zinc	EPA 200.7	0.05	0.24	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

SCOEPA00023301

Analytical Data

Wacker Siltronic

Job Number: A31120AS
Page Number: 3 of 3

Lab Sample ID: A31120AS-2
Field ID: 03-133-SW-E
Date/Time: 11/18/03 1505
Matrix: Storm Water

EAST

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L
Copper	EPA 200.7	0.03	0.04	mg/L
Zinc	EPA 200.7	0.05	0.33	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

SCOEPA00023302

Report Date: 12/18/2003
Job Number: A31121AR
PWSID:
PO Number: 4500075102
Project No.: None Provided
Project Name: Storm Water Fall 2003

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210

Sample Information

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A31121AR-1	03-132-SW-S	Waste Water	11/20/2003	1410

Analytical results are on the following page(s).

Sincerely,

Technical Services

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

TS/atc

Sample Identification

Lab Sample ID#: A31121AR-1 03-132-SW-S South

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	ND mg/L	EPA 200.7	0.03 mg/L	MAJ
Lead	ND mg/L	EPA 239.2	0.005 mg/L	CV
Total Oil & Grease	ND mg/L	EPA 1664	3. mg/L	NAC
Zinc	0.08 mg/L	EPA 200.7	0.05 mg/L	MAJ

ND means none detected at or above the detection limit listed.

SCOEPA00023304

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 11·19·03 (11·20·03) Oven Temp: 104 C Analyst: ~~Di~~

Date In: ~~11·19·Di~~ Time In/Out: 1115 / 1300

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank		0.0870	0.0870	
6	03-131-N	500	0.0993	0.0881	~~Di 12~~ 22.4
7	03-131-W	500	0.0995	0.0877	~~Di 11~~ 23.6
				Average TSS	~~Di 11~~ 23
8	03-133-E	200	0.0892	0.0870	~~22~~ 11
9	03-133-E	200	0.09041	0.0878	~~26~~ 13
				Average TSS	~~24~~ 12
10	@03-132-S	500	0.0894	0.0877	~~17~~ 3.4
11	03-132-S	500	0.0898	0.0876	~~22~~ 4.4
				Average TSS	~~19.5~~ 3.9

SDR 1234 20

Notes: Storm Water Samples.

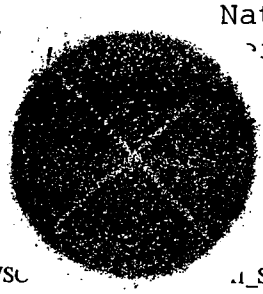
@ 03-132-S was sampled on 11/20/03.

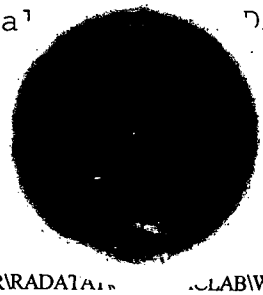
Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

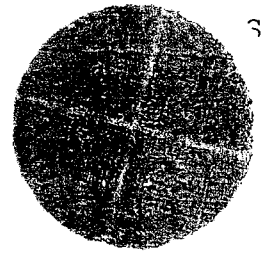
Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.

National ermit Discharge System







TJH DEI evised

\\WSC ...I_SERVER\RADATA... ...CLAB\WWTP\BENCH\TSSSWB.DOC

North East South

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon 97210
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: Storm Water FAll 2003
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: Di

FOR LABORATORY USE ONLY Page of
Job Number:
Custabb: N
VISA M/C Cardholder
Card # Exp
Cash / Check / CC $
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc	ID		Collection Date	Collection Time	Media	Analysis Requested	Test Profi
03-132-SW-S				11.20.03	1410		Oil+Grease (EPA 1664) Cu, Pb, Zn (EPA 200.8)	

Sampled By: Tom Rothschild, Koreen Lail
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 11/21/03

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Irish	11/21/03	1115	Kate Williams	11-21-03	1115
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023306

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon 97210
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: Storm Water - Fall 2003
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: DI

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY — Page ___ of ___
Job Number:
Cust Abbr: NEW
VISA MC Cardholder's
Card #: Exp:
Cash / Check / CC($)
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX UPS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Lab ID	Collection Date / Time	Media	Analysis Requested	Test/ Profile
03-131-SW-N		11.18.03 1345		Oil & Grease (1664) Cu, Pb, Zn (200.8)	
~~03-132-SW-S~~ DI				~~Oil & Grease (1664) Cu, Pb, Zn (200.8)~~	
03-133-SW-E		11.18.03 1505		Oil & Grease (1664) Cu, Pb, Zn C200.8	

Sampled By: Dianne Lush
AUTHORIZED CUSTOMER SIGNATURE: Dianne Lush DATE: 11/20/03

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Lush	11/20/03	1120	Peter Williams	11-2003	1120
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

Siltronic Corporation Storm Water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	5/26/04	Di
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:	5/26/04	DI
			North	East	South
Total Copper	0.1	mg/L	0.07	<0.03	0.05
Total Lead	0.4	mg/L	0.018	<0.005	<0.005
Total Zinc	0.6	mg/L	0.47	0.35	0.4
PH	5.5-9	Su	6.17	6.43	6.13
TSS	130	mg/L	142.25①	4	28
Oil and Grease	10	mg/L	<3	<3	<3

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

① will resample asap. DI

N:\ENVIRONMENTAL\FACLAB\WWTP\LOG\STORMWATER.DOC

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5/26/04 Oven Temp: 104 C Analyst: Di

Date In: 5/26/04 Time In/Out: 1500 / 0915 (5/27/04

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank		0.0888	0.0888	
2	04-28-N	200	0.1172	0.0883	144.5 ✓
3	04-28-N	200	0.1165	0.0885	140 ✓
				Average TSS	142.25 ✓ NORTH
4	04-29-E	200	0.0904	0.0896	4 ✓
5	04-29-E	200	0.0898	0.0890	4 ✓
				Average TSS	4 ✓ EAST
7	04-30-S	200	0.0939	0.0883	28 ✓
8	04-30-S	200	0.0927	0.0871	28 ✓
				Average TSS	28 ✓ SOUTH

Notes: Storm Water Samples.

Cal mg/L g - Tare Wt
Sample,

No m /L, dail
dai

Refer andard Me e Examinati d
Wastewater, n Edition, Sect.
page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2003 Revised

\\WSC-CLUSTER1_RADATA1_SERVER\RADATA1\Group\FACLAB\WWTP\BENCH\TSSSWB.DOC

RECEIVED JUN 18 2004

Report Date: June 14, 2004
Job Number: A40527N
PO Number: 4500075102
Project No: 28-29-30
Project Name: Stormwater Spring 2004

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 05/27/04 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A40527N-1	04-28-SW-N	Stormwater	05/26/04	1435
A40527N-2	04-29-SW-E	Stormwater	05/26/04	1515
A40527N-3	04-30-SW-S	Stormwater	05/26/04	1445

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Technical Services

TS /atc

Analytical Data

Wacker Siltronic

Job Number: A40527N

Lab Sample ID: A40527N-1
Field ID: 04-28-SW-N
Date/Time: 05/26/04 1435
Matrix: Storm Water

NORTH

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	0.07	mg/L
Zinc	EPA 200.7	0.05	0.47	mg/L
Lead	EPA 239.2	0.005	0.018	mg/L

ND means none detected at or above the detection limit listed.

SCOEPA00023311

Analytical Data

Wacker Siltronic

Job Number: A40527N

Lab Sample ID: A40527N-2
Field ID: 04-29-SW-E
Date/Time: 05/26/04 1515
Matrix: Storm Water

EAST

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.35	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A40527N
Page Number: 4 of 4

Lab Sample ID: A40527N-3
Field ID: 04-30-SW-S
Date/Time: 05/26/04 1445
Matrix: Storm Water

SOUTH

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	0.05	mg/L
Zinc	EPA 200.7	0.05	0.4	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Siltronic
Mailing Address: 7200 N W Front Ave
Portland, Oregon
Phone: (503) 219-7274 FAX: (503) 417-4141

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 28-29-30
Project Name: Stormwater-Spring-2004
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: [illegible]

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ___ of ___
Job Number:
Custabbr: NEW
VISA M/C Cardholder:
Card #: Exp:
Cash / Check / CC $
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc	ID	#	Collection Date	Collection Time	Media	Analysis Requested	Test Profile
04-28-SW-N				5/26/04	1435		Oil+Grease-1664, Cu, Pb, Zn 200.8	
04-29-SW-E				5/26/04	1515		"	
04-30-SW-S				5/26/04	1445		"	

Sampled By: Tom Rothschild + Frank Thrasher
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 5/27/04

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Irish	5/27/04	1030	[illegible]	5-27-04	1030

te Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

BMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR RVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023314

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: S[illegible]nic Corporation Site ID 93450

ADDRESS: 7200 NW Front Ave.
Portland, OR 97210-3676

FACILITY

LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-1[illegible])	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

FROM YEAR	MO	DAY	TO YEAR	MO	DAY
2004	6	1	2004	6	30
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

AMENDED REPORT

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste	SAMPLE MEASUREMENT	3,186	3,869	M^3/day	--	--	--	--		Continuous	
Water Flow	PERMIT REQUIREMENT	--	--		--	--	--			totalizing recorder	
BOD (see note below)	SAMPLE MEASUREMENT	**14.1**	17.4	Kg/day	--	**4.5**	5.0	mg/l		1/ 7	24HC
J Claxton	PERMIT REQUIREMENT	154	342		--	15	30				
TSS	SAMPLE MEASUREMENT	15.6	18.2	Kg/day	--	5.1	7.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	236	695		--	23	61				
Cr^{+6} Chrome batches are no longer treated on site	SAMPLE MEASUREMENT			Kg/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.05	0.12		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.004	<0.004	Kg/day	--	<0.001	0.001	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	20.6	27.4	Kg/day	--	6.6	8.9	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	178	365		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	--	--		--	10	15				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
J Claxton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	NUMBER	DATE YEAR	MO	DAY
503	243-2020	04	7	26

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Amended BOD Report BOD sample result for June 24 was incorrectly entered as 3.0 mg/L. This value was used to calculate the average conc. and loading for the month. The correct BOD value is 5.0 mg/L. This changes the average conc. from 4.0 to 4.5 mg/L and the average loading from 12.6 to 14.1 Kg.

SCOEPA00023315

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER	DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	6	1	TO	2004	6	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Process Waste Water Flow	SAMPLE MEASUREMENT	3,186	3,869	M^3/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	12.6	17.4	Kg/day	--	4.0	5.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	154	342		--	15	30				
TSS	SAMPLE MEASUREMENT	15.6	18.2	Kg/day	--	5.1	7.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	236	695		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			Kg/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.05	0.12		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.004	<0.004	Kg/day	--	<0.001	0.001	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	20.6	27.4	Kg/day	--	6.6	8.9	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	178	365		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	--	--		--	10	15				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Tim Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 7 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER: 047 JWC

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-49 WHICH MAY NOT BE USED.) PAGE OF

SCOEPA00023316

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-18) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2004	6	1	TO	2004	6	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (45-53) AVERAGE	(3 Card Only) QUANTITY OR LOADING (54-61) MAXIMUM	(3 Card Only) QUANTITY OR LOADING UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(4 Card Only) QUALITY OR CONCENTRATION (46-53) AVERAGE	(4 Card Only) QUALITY OR CONCENTRATION (54-61) MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	Kg/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
Turbidity	SAMPLE MEASUREMENT					3.5	22.0	NTC		6/1	Grab
	PERMIT REQUIREMENT								One sample every 4 hours		
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 per violation, imprisonment of between 6 months and 3 years)

Wacker Siltronic Corp. by:
Jim Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 7 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023317

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128
(17-19) DISCHARGE NUMBER: Outfall 002

MONITORING PERIOD
FROM YEAR 2004 MO 6 DAY 1 (20-21) (22-23) (24-25)
TO YEAR 2004 MO 6 DAY 30 (26-27) (28-29) (30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	(54-61) AVERAGE	MAXIMUM	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	429	806	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	10	15				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Jim Clayton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 04 MO 7 DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023318

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	6	1	TO	2004	6	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	3,616	4,361	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	77.4	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	6.0	7.2	8.5			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Jim Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	04	7	8
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023319

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

ER: 046.JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

2004-July-09

June 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the June 2004 Industrial Discharge Report for Siltronic Corporation Municipal Discharge permit 469-01.

During the month of June, Siltronic diverted to the City for 20.5 hours at 200-250 gal/min due to suspended solids problems. The following table shows waste stream sample dates and mg/L of TSS measured and diversion dates and length of diversion:

Diversion Date	Diversion Time	Sample Date	Sample Type	mg/L TSS
June 6 (2045-0240)	6 hours	June 3	24 hr comp	62
June 10 (0600-1330)	7.5 hours	June 11	24 hr comp	260
June 17 (0600-1200)	6 hours	June 17	24 hr comp	1896
June 21 (1430-1540)	1 hour	June 17	Grab	225
		June 18	24 hr comp	43.5
	Total: 20.5 hours	June 22	24 hr comp	65.5
		June 23	24 hr comp	48
		June 24 morning	24 hr comp	224
		June 24 afternoon	Grab @ 1415	93.5
		June 25	24 hr comp	56

The average TSS for the month was 331.9 mg/L. The high value obtained June 17 was a 24-hour composite sample overnight beginning June 16. A grab sample was taken during the day June 17. Grab sample results not included in average calculation.

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

Jim Claxton Jim Claxton
Environmental Engineer

Enclosure:
POTW-IDR File
cc: Tom Rothschild
POTW-IDR File
7003 2260 0003 1472 8331

4640175004
SUSC SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

6/30/2004

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	736,186	(100s of GALLONS)
CURRENT READING	109367	912,442	(100s of GALLONS)
CONSUMPTION	0	176,256	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,762,560	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,762,560	* 10 GAL / 7.48 GAL/CF =	2,356,364	CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,356,364	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	541,421	(10s of GALLONS)
CURRENT READING	617,550	(10s of GALLONS)
CONSUMPTION	76,129	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	76,129	* 10 GAL / 7.48 GAL/CF=	101,777	CF

This meter reading was reported by: C. Justin Darr on 7/2/04
C. Justin Darr — date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023321

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: 15TH of July

SAMPLING PERIOD: Quarterly
April – June 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
June 3, 2004	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	SM-4508H	SU	0.1	5.0 - 11.5	N/A	No excursions
TTOs (Volatiles)	EPA 8260	<0.01 mg/L	0.005	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
June 3, 2004	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	<0.002 mg/L	0.002	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	331.9 mg/L	0.1	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: Jim Clayton Date: 7/9/04

SCOEPA00023322

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: 15TH of July

SAMPLING PERIOD: June 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Jim Clayton Date: 7/9/04

Document2

SCOEPA00023323

RECEIVED JUN 18 2004

Report Date: June 15, 2004
Job Number: A40603AX
PO Number: 4500075102
Project No: 59-62
Project Name: Monthly

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 06/03/04 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A40603AX-1	04-59-CE-C	Waste Water	06/03/04	0730
A40603AX-2	04-60-CE-G	Waste Water	06/03/04	0730
A40603AX-3	04-61-OWW-C	Waste Water	06/03/04	0730
A40603AX-4	04-62-OWW-G	Waste Water	06/03/04	0730

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Technical Services

TS /atc

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A40603AX

Lab Sample ID: A40603AX-3
Field ID: 04-61-OWW-C
Date/Time: 06/03/04 0730
Matrix: Waste Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units	Analysis Date	Analyst
Arsenic	EPA 200.8	0.002	ND	mg/L	06/04/04	CV
Molybdenum	EPA 200.8	0.005	0.071	mg/L	06/04/04	CV

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023325

Analytical Data

Wacker Siltronic

Job Number: A40603AX

Lab Sample ID: A40603AX-4
Field ID: 04-62-OWW-G
Date/Time: 06/03/04 0730
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/07/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	790.
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	ND
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	5.
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Analytical Data

Wacker Siltronic

Job Number: A40603AX

Lab Sample ID: A40603AX-4
Field ID: 04-62-OWW-G
Date/Time: 06/03/04 0730
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/07/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
1,1-Dichloropropene	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	8.
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND

Results expressed as $\mu g/L$ unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023327

Analytical Data

Wacker Siltronic

Job Number: A40603AX

Lab Sample ID: A40603AX-4
Field ID: 04-62-OWW-G
Date/Time: 06/03/04 0730
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/07/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	5.	ND	ND
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
Dibromofluoromethane (Surr.)	---	---	106.%
1,2-Dichloroethane-d4 (Surr.)	---	---	111.%
Toluene-d8 (Surr.)	---	---	98.%
4-Bromofluorobenzene (Surr.)	---	---	99.%

Results expressed as μg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023328

Analytical Data

Wacker Siltronic

Job Number: A40603AX

Lab Sample ID: A40603AX-4
Field ID: 04-62-OWW-G
Date/Time: 06/03/04 0730
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: CLISolventScan; Solvent Scan.
Analysis Date: 06/04/04
Analyst: MKM

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Isopropanol	1.	ND	ND

Results expressed as mg/l unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023329

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 6-3-04 Oven Temp: 104 C Analyst: Di

Date In: 6-3-04 Time In/Out: 1030 / 1315

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0886	0.0886	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0903	0.0880	4.6
3	CE FAB-2	500	0.0909	0.0886	4.6
				Average CE FAB-2 TSS	4.6
4	OWW	100	0.0956	0.0893	63
5	OWW	100	0.0957	0.0896	61
				Average OWW TSS	62
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

N:ENVIRONMENTAL\FACLAB\WWTP\BENCH\TSSB.DOC

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 11 Jun 2004 Oven Temp: 104 C Analyst: JR

Date In: 11 Jun 2004 Time In/Out: 0925 / 1300

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0885	0.0888	-
	CE FAB-1	\			
	CE FAB-1	\			
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0927	0.0892	7.0
3	CE FAB-2	500	0.0930	0.0895	7.0
				Average CE FAB-2 TSS	7.0 (1)
4	OWW	100	0.1137	0.0883	254
5	OWW	100	0.1150	0.0884	266
				Average OWW TSS	260
				Average TSS	

Comments: (1) WWTP upset 1-2 days before sampling.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

SCOEPA00023331

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 17Jun2004 Oven Temp: _____ C Analyst: JJR/CWP

Date In: 17Jun2004 Time In/Out: 9:13 / 13:10

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0884	0.0885	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0912	0.0895	3.4
3	CE FAB-2	500	0.0902	0.0884	3.6
				Average CE FAB-2 TSS	3.5 ✓
4	OWW	100	0.2812	0.0891	1921 ✓
5	OWW	100	0.2753	0.0882	1871
				Average OWW TSS	1896 ✓
				Average TSS	

Comments: NOx Scrubber upset to CAD system. Diverted Hydrocyklon to OWW

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

N:ENVIRONMENTAL\FACLAB\WWTP\BENCH\TSSB.DOC

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 18 June 2004 Oven Temp: 101 C Analyst: CWP/JJR

Date In: 18 June 2004 Time In/Out: 13:30 / 16:10

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
5	Blank	NA	~~0.0891~~ 0.0890	0.0892	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
	CE FAB-2				
	CE FAB-2				
				Average CE FAB-2 TSS	
2	OWW	100	~~0.0901~~ 0.0940	0.0901	~~39~~
3	OWW	100	~~0.0877~~ 0.0925	0.0877	48
				Average OWW TSS	43.5 ✓
				Average TSS	

Comments: 24-hour composite sample. JJR

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference:
1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

SCOEPA00023333

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 22/23 June 2004 Oven Temp: 101 C Analyst: CWP/TJR

Date In: 23 June 2004 Time In/Out: 9:40 / 13:15

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0880	0.0881	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
	CE FAB-2				
	CE FAB-2				
				Average CE FAB-2 TSS	
2	OWW 6/22	100	0.0946	0.0890	56
3	OWW 6/22	100	0.0956	0.0881	75
				Average OWW TSS	65.5 J
7	OWW 6/23	100	0.0928	0.0884	44
8	OWW 6/23	100	0.0936	0.0883	53
				Average TSS	48.5 J

Comments: Two OWW Samples, one from June 22 and the other from June 23

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

SCOEPA00023334

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 24 Jun 2004 Oven Temp: 105 C Analyst: CWP/TJR

Date In: 24 Jun 2004 Time In/Out: 9:00 / 13:00

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0879	0.0879	0
	CE FAB-1	–			
	CE FAB-1	–			
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0923	0.0891	~~32~~ 6.4 ✓
3	CE FAB-2	500	0.0935	0.0913	~~23~~ 4.4 ✓
				Average CE FAB-2 TSS	~~27~~ 5.4
7	OWW (1)	100	0.1109	0.0879	230 ✓
8	OWW	100	0.1122	0.0903	219
				Average OWW TSS	224.5 ✓
				Average TSS	

Comments: (1) North Sump was flushed during this sample time. TJR

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

SCOEPA00023335

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 24 June 2004 Oven Temp: 108 C Analyst: CWP/TJR

Date In: 24 June 2004 Time In/Out: 14:30 / 16:20

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
4	Blank	NA	0.0896	0.0898	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
	CE FAB-2				
	CE FAB-2				
				Average CE FAB-2 TSS	
41	OWW	100	0.0971	~~0.0879~~ 0.0898	92
5	OWW	100	0.0987	0.0892	95
				Average OWW TSS	93.5
				Average TSS	

Comments: Grab Sample at 14:15

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

SCOEPA00023336

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 25 Jun 2004 Oven Temp: 108 C Analyst: CWP/TJR

Date In: 25 Jun 2004 Time In/Out: 13:00 /

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0890	0.0890	0
	CE FAB-1				
	CE FAB-1				
			Average CE FAB-1 TSS		
	CE FAB-2				
	CE FAB-2				
			Average CE FAB-2 TSS		
2	OWW	100	0.0968	0.0897	71
3	OWW	100	0.0914	0.0873	41
			Average OWW TSS		~~30~~ 56
			Average TSS		

Comments: 24-hour composite sample.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

SCOEPA00023337

COFFEY LA[illegible]TORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Siltronic
Mailing Address: 7200 N W Front Ave
Portland, Oregon
Phone: (503) 219-7274 FAX: (503) 417-4141

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: ~~59~~ 59~62
Project Name: Monthly
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: DI

FOR LABORATORY USE ONLY Page ___ of ___
Job Number:
Custabbr: ☐ NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp:
Cash / Check / CC $ #
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc	ID	#	Collection Date	Collection Time	Media	Analysis Requested	Test/Profile
04-59-CE-C				6/3/04	0730		BOD, Cr(T)	
04-60-CE-g				6/3/04	0730		8260, 8270 1-2, Diphenyl hydrazine	
04-61-OWW-C				6/3/04	0730		Total As, molybdenum	
04-62-OWW-g				6/3/04	0730		8260, IPA	

Sampled By: Dianne Irish
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 6/3/04

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Irish	6/3/04	1030	[signature]	6-3-04	1030
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	5	1	TO	2004	5	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	(54-61) AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	3,347	3,668	M^3/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	15.3	17.6	Kg/day	--	4.5	5.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	154	342		--	15	30				
TSS	SAMPLE MEASUREMENT	10.1	16.0	Kg/day	--	2.9	4.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	236	695		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			Kg/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.05	0.12		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.004	<0.004	Kg/day	--	<0.001	<0.001	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	24.2	27.9	Kg/day	--	7.1	8.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	178	365		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	10	15				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $50,000 per violation, imprisonment of between 6 months and 5 years.)

Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 6 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.
5/7: pH <6.0 for 9 mins & 29 secs due to rainfall.

E320 40 JWC

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T[illegible] WHICH MAY NOT BE USED.)

SCOEPA00023339

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2004	5	1	TO	2004	5	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(46-53) MAXIMUM	(46-53) UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	Kg/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
Turbidity	SAMPLE MEASUREMENT					3.9	8.9	NTC		6/1	Grab
	PERMIT REQUIREMENT									One sample every 4 hours	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Siltronic Corp. by:

J Clayton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 6 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023340

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16) (17-19)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	5	1	TO	2004	5	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (66-69)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	407	757	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	10	15				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years)

Siltronic Corp. by:
J. Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 6 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023341

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(3-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2004	5	1	TO	2004	5	31

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	3,754	4,384	M^3/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	75.2	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	5.6	7.2	8.7			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 04 MO 6 DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023342

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER: 039.JWC

2004-June-09

May 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the May 2004 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
POTW-IDR File

cc: Tom Rothschild
POTW-IDR File

7002 2030 0003 5905 2028

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: June 15, 2004

SAMPLING PERIOD: May 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: J Clayton Date: 6/9/04

Document1

4640175004
SUSC SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

5/31/2004

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	559,955	(100s of GALLONS)
CURRENT READING	109367	736,186	(100s of GALLONS)
CONSUMPTION	0	176,231	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,762,310	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,762,310	* 10 GAL / 7.48 GAL/CF =	2,356,029	CF
TOTAL THROUGH OVERFLOW LINE	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,356,029	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	468,805	(10s of GALLONS)
CURRENT READING	541,421	(10s of GALLONS)
CONSUMPTION	72,616	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	72,616	* 10 GAL / 7.48 GAL/CF=	97,080	CF

This meter reading was reported by: C. Justin Darr on 6/1/04 (date)

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023345

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(1-16) 101128 PERMIT NUMBER

(17-19) Outfall 001 DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	4	1	TO	2004	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	917,000	995,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	44.9	58.1	lbs/day	--	5.8	7.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	60.9	135.4	lbs/day	--	8.2	19.5	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.008	0.008	lbs/day	--	<0.001	0.001	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	57.7	63.9	lbs/day	--	7.5	8.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 per violation, imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 5 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

ER 034 JWC

SCOEPA00023346

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(1-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	4	1	TO	2004	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 USC § 1001 AND 33 USC § 1319. (Penalties under these statutes may include fines up to $10,000 per violation, or maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 5 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023347

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128 (17-19) DISCHARGE NUMBER: Outfall 002

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	4	1	TO	2004	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(4 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	QUANTITY OR LOADING (54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	QUALITY OR CONCENTRATION (46-53) AVERAGE	QUALITY OR CONCENTRATION (54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	218,000	557,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
J Clayton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 5 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023348

FACILITY NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-10) PERMIT NUMBER	(11-15) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	4	1	TO	2004	4	30
	(16-17)	(18-19)	(20-21)		(22-23)	(24-25)	(26-27)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (54-58)	SAMPLE TYPE (59-61)
Outfall flow	SAMPLE MEASUREMENT	1,135,000	1,517,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	73.8	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.0	7.2	7.5			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 Penalties under these statutes may include fines up to $10,000 per violation imprisonment of between 6 months and 5 years

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 5 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

EPA Form 3320-1 (Rev. 9-88) Previous editions may be used. (REPLACES EPA FORM T-40 W...CH MAY NOT BE USED.)

SCOEPA00023349

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER: 033.JWC

2004-May-11

April 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the April 2004 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
POTW-IDR File

cc: Tom Rothschild
POTW-IDR File

7002 2030 0003 5905 2028

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: May 15th, 2004

SAMPLING PERIOD: April 2001

For Industrial Source Control Division Use Only	
Date Postmarked/Received	Date Entered
	Entered By
Comments:	

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: J Clayton Date: May 11/2004

Document1

4640175004
SUSC SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

4/30/2003

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	370,460	(100s of GALLONS)
CURRENT READING	109367	559,955	(100s of GALLONS)
CONSUMPTION	0	189,495	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,894,950	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,894,950	* 10 GAL / 7.48 GAL/CF =	2,533,356 CF
TOTAL THROUGH OVERFLOW LINE	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,533,356 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	399,072	(10s of GALLONS)
CURRENT READING	468,805	(10s of GALLONS)
CONSUMPTION	69,733	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	69,733	* 10 GAL / 7.48 GAL/CF=	93,226 CF

This meter reading was reported by: C. Justin Darr on 5/11/04 (date)

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Siltronic Corporation
7200 N.W. Front Avenue, M/S 30
Portland, OR 97210-3676, USA
Tel. 1-503-219-7313
Fax 1-503-219-7599
jim.claxton@siltronic.com

ER026 : JW C

FAX

2004-April-16

To Elliot Zais

From Jim Claxton

Fax 503-229-6957

4 Page(s) incl. coversheet

Reference Additional Analytical Testing for NPDES Renewal

Hi Elliot

Here the results from Coffey. Call me if you have any questions.

jim

Ausgabe: 2002-04

Report Date: 04/16/2004
Job Number: A40401AZ
PWSID:
PO Number: 4500075102
Project No.: 31
Project Name: Annual 3510-2C

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210

Sample Information

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A40401AZ-1	04-31-CE-C	Water	04/01/2004	0730

Analytical results are on the following page(s).

Sincerely,

Technical Services

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

TS/atc

Sample Identification

Lab Sample ID#: A40401AZ-1 04-31-CE-C

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Aluminum	ND mg/L	EPA 200.8	0.1 mg/L	CV
Ammonia Nitrogen	2. mg/L	SM4500NH3BC	1. mg/L	MGH
Antimony	ND mg/L	EPA 200.8	0.0025 mg/L	CV
Arsenic	ND mg/L	EPA 200.8	0.0025 mg/L	CV
Barium	0.001 mg/L	EPA 200.8	0.001 mg/L	CV
Beryllium	ND mg/L	EPA 200.8	0.0025 mg/L	CV
Boron	ND mg/L	EPA 200.8	0.025 mg/L	CV
Bromide	ND mg/L	EPA 300.0B	50. mg/L	BAB
Cadmium	ND mg/L	EPA 200.8	0.001 mg/L	CV
Chloramine	ND mg/L	SM 4500-Cl-G	0.05 mg/L	JG
Cobalt	ND mg/L	EPA 200.8	0.0005 mg/L	CV
Copper	0.006 mg/L	EPA 200.8	0.005 mg/L	CV
Iron	ND mg/L	EPA 200.7	0.2 mg/L	MAJ
Lead	ND mg/L	EPA 200.8	0.001 mg/L	CV
Magnesium	2.3 mg/L	EPA 200.7	0.1 mg/L	MAJ
Manganese	0.018 mg/L	EPA 200.8	0.001 mg/L	CV
MBAS (Surfactants)	0.24 mg/L	EPA 425.1	0.05 mg/L	BAB
Mercury	ND mg/L	EPA 245.1	0.0005 mg/L	MAJ
Molybdenum	0.068 mg/L	EPA 200.8	0.005 mg/L	CV
Nickel	ND mg/L	EPA 200.8	0.0025 mg/L	CV
Nitrate	40. mg/L	EPA 300.0	10. mg/L	BAB
Nitrite	2.4 mg/L	EPA 300.0	0.1 mg/L	BAB
Residual Chlorine	ND mg/L	SM 4500-Cl-G	0.05 mg/L	JG
Selenium	ND mg/L	EPA 200.8	0.025 mg/L	CV
Silver	ND mg/L	EPA 200.8	0.0025 mg/L	CV
Sulfate	21. mg/L	EPA 300.0	0.5 mg/L	BAB
Sulfide	ND mg/L	SM 4500-S2-D	0.02 mg/L	MAJ
Sulfite	ND mg/L	SM 4500-SO3-B	0.4 mg/L	JG

4/16/2004

Thallium	ND mg/L	EPA 200.8	0.001 mg/L	CV
Tin	ND mg/L	EPA 200.8	0. mg/L	CV
Titanium	ND mg/L	EPA 200.8	0.01 mg/L	CV
Total Chlorine	ND mg/L	SM 4500-Cl-G	0.05 mg/L	JG
Total Cyanide	ND mg/L	EPA 335.2	0.01 mg/L	MGH
Total Kjeldahl Nitrogen	1. mg/L	SM 4500-Norg-B	1. mg/L	MGH
Total Oil & Grease	ND mg/L	EPA 1664	3. mg/L	NAC
Total Organic Carbon	6.3 mg/L	EPA 415.1	0.8 mg/L	BAB
Total Phenols	ND mg/L	EPA 420.1	0.1 mg/L	JG
Zinc	ND mg/L	EPA 200.8	0.025 mg/L	CV

ND means none detected at or above the detection limit listed.

SCOEPA00023356

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	3	1	TO	2004	3	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	888,000	1,063,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	35.9	51.4	lbs/day	--	5.0	7.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	51.7	78.5	lbs/day	--	7.3	10.5	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.007	<0.007	lbs/day	--	<0.001	<0.001	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	54.5	63.3	lbs/day	--	7.7	8.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
J Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	04	4	12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

The detection limit for Total Chrome is 0.001 ppm. This number will be used for calculating Total Chrome concentration and loading beginning March 2004.

ER: 024 JWC

SCOEPA00023357

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(5-16) PERMIT NUMBER: 101128

(17-18) DISCHARGE NUMBER: Outfall 001

MONITORING PERIOD

FROM YEAR (19-21)	MO (22-23)	DAY (24-25)	TO YEAR (26-27)	MO (28-29)	DAY (30-31)
2004	3	1	2004	3	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	MAXIMUM (54-61)	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (66-69)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

J. Clayton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	NUMBER	DATE YEAR	MO	DAY
503	243-2020	04	4	12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023358

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER (3-16)	DISCHARGE NUMBER (17-19)
101128	Outfall 002

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2004	3	1	TO	2004	3	31

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	297,000	719,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 4 | DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023359

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	3	1	TO	2004	3	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,185,000	1,575,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	71.7	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.0	7.2	9.1			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

J. Claxton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	04	4	12
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

3/11/04: pH of 9.1 time: 51 seconds. Cause: fire system water flush. No action was needed.

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER: 023.JWC

2004-April-8

March 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the March 2004 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
POTW-IDR File
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

SUSC SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

3/31/2003

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	184,461	(100s of GALLONS)
CURRENT READING	109367	370,460	(100s of GALLONS)
CONSUMPTION	0	185,999	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,859,990	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,859,990	* 10 GAL / 7.48 GAL/CF =	2,486,618	CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,486,618	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	322,458	(10s of GALLONS)
CURRENT READING	399,072	(10s of GALLONS)
CONSUMPTION	76,614	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	76,614	* 10 GAL / 7.48 GAL/CF=	102,425	CF

This meter reading was reported by: C. Justin Darr on 4/1/04
C. Justin Darr date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023362

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: April 15TH

SAMPLING PERIOD: January – March 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	SM 4500-H	SU	0.1	5.0 - 11.5	N/A	
TTOs (Volatiles)	EPA 8260	<0.01 mg/L	0.005	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	<0.002 mg/L	0.002	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	70 mg/L	0.1	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: J Clayton Date: 4/8/04

SCOEPA00023363

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: April 15TH.

SAMPLING PERIOD: March 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	FOXBORO	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
NO EXCURSIONS				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: J Clayton Date: 4/8/04

Document2

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3/4/04 Oven Temp: 104 C Analyst: DJ

Date In: 3/4/04 Time In/Out: 1030 / 1330

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0866	0.0866	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0905	0.0879	5.2
3	CE FAB-2	500	0.0921	0.0894	5.4
				Average CE FAB-2 TSS	5.3
4	OWW	100	0.0980	0.0889	91
5	OWW	100	0.0986	0.0888	98
				Average OWW TSS	94.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference:
1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

L:\FACLAB\WWTP\BENCH\TSSB.DOC

SCOEPA00023365

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3/11/04 Oven Temp: 103 C Analyst: DI

Date In: 3/11/04 Time In/Out: 1030 / 1300

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0866	0.0866	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0938	0.0887	10.2
3	CE FAB-2	506	0.0939	0.0885	10.8
				Average CE FAB-2 TSS	10.5
4	OWW	100	0.0973	0.0900	73
5	OWW	100	0.0966	0.0892	74
				Average OWW TSS	73.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

N:ENVIRONMENTAL\FACLAB\WWTP\BENCH\TSSB.DOC

SCOEPA00023366

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3-18-04 Oven Temp: 104 C Analyst: DI

Date In: 3-18-04 Time In/Out: 1000 / 1330

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0882	0.0882	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0918	0.0886	6.4
3	CE FAB-2	500	0.0925	0.0890	7
				Average CE FAB-2 TSS	6.7
4	OWW	100	0.0928	0.0886	42
5	OWW	100	0.0927	0.0886	41
				Average OWW TSS	41.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 06 Mar 2004 Revised

N:ENVIRONMENTAL\FACLAB\WWTP\BENCH\TSSB.DOC

COFFEY LABO. .TORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Siltronic
Mailing Address: 7200 N W Front Ave
Portland, Oregon
Phone: (503) 219-7274 FAX: (503) 417-4141

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 19~23
Project Name: Monthly
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: DI

FOR LABORATORY USE ONLY Page ___ of ___
Job Number:
Custabbr: ☐ NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp:
Cash / Check / CC $ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc	ID	#	Collection Date	Collection Time	Media	Analysis Requested	Test/Profile
04-19-CE-C				3/4/04	0730		BOD, Cr (T)	
04-21-CE-G				3/4/04	0730		8260, 8270, 1-2, Diphenolhydrazine	
04-22-OWW-C				3/4/04	0730		As (T)	
04-23-OWW-G				3/4/04	0730		8260, IPA	

Sampled By: Dianne Irish
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 3/4/04

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Irish	3/4/04	1040	[signature]	3-4-04	1040

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023368

RECEIVED MAR 1 9 2004

Report Date: March 12, 2004
Job Number: A40305H
PO Number: 4500075102
Project No: 19-23
Project Name: Monthly

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 03/05/04 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A40305H-1	04-19-CE-C	Waste Water	03/04/04	0730
A40305H-2	04-21-CE-G	Waste Water	03/04/04	0730
A40305H-3	04-22-OWW-C	Waste Water	03/04/04	0730
A40305H-4	04-23-OWW-G	Waste Water	03/04/04	0730

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

John A. Guild

Technical Services

TS /atc

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023369

Analytical Data

Wacker Siltronic

Job Number: A40305H

Lab Sample ID: A40305H-3
Field ID: 04-22-OWW-C
Date/Time: 03/04/04 0730
Matrix: Waste Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units	Analysis Date	Analyst
Arsenic	EPA 200.8	0.002	ND	mg/L	03/10/04	CV

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023370

Analytical Data

Wacker Siltronic

Job Number: A40305H

Lab Sample ID: A40305H-4
Field ID: 04-23-OWW-G
Date/Time: 03/04/04 0730
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: CLISolventScan; Solvent Scan.
Analysis Date: 03/08/04
Analyst: MKM

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Isopropanol	1.	ND	3.

Results expressed as mg/l unless otherwise noted.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023371

Analytical Data

Wacker Siltronic

Job Number: A40305H

Lab Sample ID: A40305H-4
Field ID: 04-23-OWW-G
Date/Time: 03/04/04 0730
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/05/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	0.015	ND	0.14
Benzene	0.005	ND	ND
Bromobenzene	0.005	ND	ND
Bromochloromethane	0.005	ND	ND
Bromodichloromethane	0.005	ND	ND
Bromoform	0.005	ND	ND
Bromomethane	0.005	ND	ND
2-Butanone (MEK)	0.005	ND	ND
n-Butylbenzene	0.005	ND	ND
sec-Butylbenzene	0.005	ND	ND
tert-Butylbenzene	0.005	ND	ND
Carbon Disulfide	0.005	ND	ND
Carbon tetrachloride	0.005	ND	ND
Chlorobenzene	0.005	ND	ND
Chloroethane	0.005	ND	ND
2-Chloroethylvinyl ether	0.005	ND	ND
Chloroform	0.005	ND	ND
Chloromethane	0.005	ND	ND
2-Chlorotoluene	0.005	ND	ND
4-Chlorotoluene	0.005	ND	ND
1,2-Dibromo-3-chloropropane	0.005	ND	ND
Dibromochloromethane	0.005	ND	ND
1,2-Dibromoethane	0.005	ND	ND
Dibromomethane	0.005	ND	ND
1,2-Dichlorobenzene	0.005	ND	ND
1,3-Dichlorobenzene	0.005	ND	ND
1,4-Dichlorobenzene	0.005	ND	ND
Dichlorodifluoromethane	0.005	ND	ND
1,1-Dichloroethane	0.005	ND	ND
1,2-Dichloroethane	0.005	ND	ND

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023372

Analytical Data

Wacker Siltronic

Job Number: A40305H

Lab Sample ID: A40305H-4
Field ID: 04-23-OWW-G
Date/Time: 03/04/04 0730
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/05/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	0.005	ND	ND
cis-1,2-Dichloroethene	0.005	ND	ND
trans-1,2-Dichloroethene	0.005	ND	ND
1,2-Dichloropropane	0.005	ND	ND
1,3-Dichloropropane	0.005	ND	ND
2,2-Dichloropropane	0.005	ND	ND
1,1-Dichloropropene	0.005	ND	ND
cis-1,3-Dichloropropene	0.005	ND	ND
trans-1,3-Dichloropropene	0.005	ND	ND
Ethylbenzene	0.005	ND	ND
Hexachlorobutadiene	0.005	ND	ND
2-Hexanone	0.005	ND	ND
Iodomethane	0.005	ND	ND
Isopropylbenzene	0.005	ND	ND
4-Isopropyltoluene	0.005	ND	ND
4-Methyl-2-pentanone	0.005	ND	ND
Methylene chloride	0.005	ND	ND
Naphthalene	0.005	ND	ND
n-Propylbenzene	0.005	ND	ND
Styrene	0.005	ND	ND
1,1,1,2-Tetrachloroethane	0.005	ND	ND
1,1,2,2-Tetrachloroethane	0.005	ND	ND
Tetrachloroethene	0.005	ND	ND
Toluene	0.005	ND	ND
1,2,3-Trichlorobenzene	0.005	ND	ND
1,2,4-Trichlorobenzene	0.005	ND	ND
1,1,1-Trichloroethane	0.005	ND	ND
1,1,2-Trichloroethane	0.005	ND	ND
Trichloroethene	0.005	ND	ND
Trichlorofluoromethane	0.005	ND	ND

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023373

Analytical Data

Wacker Siltronic

Job Number: A40305H

Lab Sample ID: A40305H-4
Field ID: 04-23-OWW-G
Date/Time: 03/04/04 0730
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/05/04
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	0.005	ND	ND
1,2,4-Trimethylbenzene	0.005	ND	ND
1,3,5-Trimethylbenzene	0.005	ND	ND
Vinyl acetate	0.005	ND	ND
Vinyl chloride	0.005	ND	ND
m,p-Xylene	0.01	ND	ND
o-Xylene	0.005	ND	ND
Dibromofluoromethane (Surr.)	---	---	103.%
1,2-Dichloroethane-d4 (Surr.)	---	---	94.%
Toluene-d8 (Surr.)	---	---	107.%
4-Bromofluorobenzene (Surr.)	---	---	90.%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023374

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Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Mr. Dennis Jurries
Department of Environmental Quality
Northwest Water Quality Division
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER:016 JWC

2004-March-30

Stromwater Sampling January 14, 2004 by Wesley McDaniel BES

Dear Mr. Jurries

January 14, 2004 Mr. Wesley McDaniel with the Water Pollution Control Laboratory, City of Portland Environmental Services, collected a stormwater grab sample from Siltronic's north stormwater sampling point. The pH of the sample measured by the BES laboratory was 5.3 (S.U.). The recommended benchmark for pH is >5.5 - < 9.0 (S.U.). As required by Schedule A (10) of Siltronic's 1200-Z permit, we have reviewed our SWPCP and are submitting the results of the review to DEQ and the City in accordance with Schedule B (3).

The enclosed letter was sent to Mr. McDaniel and is your copy of the results of the review.

If you have any other questions, please contact me.

Best regards,

Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

cc: Tom Rothschild
SWPCP File DEQ
SWPCP File BES

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Jim Claxton
Environmental Engineer

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jim.claxton@siltronic.com

Wesley C. McDaniel
Water Pollution Control Laboratory
City of Portland Environmental Services
6543 N. Burlington Ave.
Portland, Oregon 97203-5452

ER:015 JWC

2004-March-30

Stromwater Sampling January 14, 2004

Dear Mr. McDaniel

January 14, 2004 you collected a stormwater grab sample from Siltronic's north stormwater sampling point. The pH of the sample measured by your laboratory was 5.3 (S.U.). The recommended benchmark for pH is >5.5 - < 9.0 (S.U.). As required by Schedule A (10) of Siltronic's 1200-Z permit, we have reviewed our SWPCP and are submitting the results of the review to DEQ and the City in accordance with Schedule B (3).

Environmental impact

Stormwater passing though the north sampling point is mixed with Siltronic's NPDES effluent discharge to the Willamette River. The pH of the effluent is monitored and controlled by the Siltronic's wastewater treatment facility (WWTP). Records from the WWTP indicate that the pH range of the effluent from 2pm until midnight, January 14, was 6.6 to 7.3. No environmental impact due to pH is expected to occur from stormwater passing though the north sampling point.

Review of Stormwater Pollution Control Plan: Siltronic continues to follow Stormwater Best Management Practices.

Containment: All hazardous material are stored undercover, within berms or other secondary containment devices to prevent leaks and spills from contaminating stormwater. All personnel involved with chemical transportation are trained in the safety handling and transport of chemicals. Each is also trained in Chemical Spill Response.

Oil and Grease Controls: An oil and grease separator is located in the oil dispensing area and is set-up for annual inspection and cleaning.

Waste Chemicals and Material Disposal: Wastes are recycled or disposed of in a manner to eliminate or minimize exposure of pollutants to storm water. Wastes contained in bins or dumpsters, where there is a potential for drainage of storm water through the waste, are covered or have sealed side to prevent exposure of storm water to these pollutants.

Covering Activities: All manufacturing activities are conducted indoors. Treatment and storage areas are undercover.

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Housekeeping: Areas that may contribute pollutants to storm water are kept clean. Prompt clean up of spills and leaks as well as proper maintenance of vehicles is conducted to eliminate or minimize exposure of storm water to pollutants. In addition, the parking lot and fenced areas swept semi-annually.

Isolation Valves: Catch basins near chemical delivery areas are installed with isolation valves, which are closed while tanks are being filled. Additional isolation valves are located on catch basins to reduce the possibility of a spill reaching an outfall point.

Recommendations

At this time Siltronic Corporation believe that we are meeting or exceeding efforts to minimize the environmental impact of stormwater runoff from the Siltronic property.

Tom Rothschild, Siltronic's Facilities Laboratory Chemist, will be contacting you to coordinate a join sampling day in April or May to sample all three stormwater outfalls

If you have any question for Tom, he can be reached at 503-219-7374.

If you have any other questions, please contact me.

Best regards,

Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

cc: Tom Rothschild
Dennis Jurries DEQ
SWPCP File DEQ
SWPCP File BES

N:\Environmental\Enviromental Affairs\Enviromental-NPDES\Storm Water\stormwater letter 040114.doc

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Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER: 011.JWC

2004-March-8

February 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the February 2004 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period

If you have any questions, please contact Jim Claxton.

Regards,
Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
POTW-IDR File
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

SUSC SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

2/28/2004

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	18,047	(100s of GALLONS)
CURRENT READING	109367	184,461	(100s of GALLONS)
CONSUMPTION	0	166,414	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,664,140	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,664,140	* 10 GAL / 7.48 GAL/CF =	2,224,786	CF
TOTAL THROUGH OVERFLOW LINE	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,224,786	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	237,105	(10s of GALLONS)
CURRENT READING	322,458	(10s of GALLONS)
CONSUMPTION	85,353	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	85,353	* 10 GAL / 7.48 GAL/CF=	114,108	CF

This meter reading was reported by: C. Justin Darr on 3/8/04 date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023379

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: March 15, 2004

SAMPLING PERIOD: February 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: J. Clayton Date: 3/8/04

Document1

SCOEPA00023380

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Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, M/S 30
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER:012. JWC

2004-March-08

Discharge Monitoring Report for February 2004

Dear Dr. Zais:

Enclosed is the February 2004 Discharge Monitoring Report for Wacker Siltronic Corporation NPDES permit number 101128, File Number 93450. Wacker Siltronic has operated in compliance with the Permit for this reporting period and has no discharge violations to report.

If you have any questions, please contact me.

Best regards,

Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
Discharge Monitoring Report

cc: Tom Rothschild
DMR File

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	2	1	TO	2004	2	29
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	940,000	1,065,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	39.5	53.6	lbs/day	--	5.1	6.4	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	66.3	102.0	lbs/day	--	8.5	12.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	51.2	67.6	lbs/day	--	6.6	9.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Jim Claxton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 04 MO 3 DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

ER012.dwc

EPA Form 3320-1 (Rev. 9-88) Previous editions may be used. (REPLACES EPA FORM T-45 WHICH MAY NOT BE USED.)

SCOEPA00023382

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(3-16) 101128 PERMIT NUMBER
(17-18) Outfall 001 DISCHARGE NUMBER

MONITORING PERIOD
FROM YEAR (19-21) 2004 MO (22-23) 2 DAY (24-25) 1
TO YEAR (26-27) 2004 MO (28-29) 2 DAY (30-31) 29

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(46-53) MAXIMUM	(46-53) UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(46-53) MAXIMUM	(46-53) UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Jim Clayton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE
AREA CODE 503 NUMBER 243-2020

DATE
YEAR 04 MO 3 DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023383

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(1-16) PERMIT NUMBER	(17-18) DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	2	1	TO	2004	2	29
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	291,000	443,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Tom Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020
DATE: YEAR 04 MO 3 DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023384

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	2	1	TO	2004	2	29
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,231,000	1,368,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	66.7	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.0	7.2	7.5			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Jim Clayton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 3 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Inter-Laboratory Split Comparison

Sampling event

DEQ Case Number: 2003-1257

Source Name: Siltronic Corporation
Contact Person: Thomas J. Rothschild
Address: 7200 NW Front Ave., Portland, Oregon 97210
Collected By: Dianne Irish

Sample Date: 29 October 2003
Phone: 503-243-2020

Region/Division: _____

Analysis ♠	FIELD MEASUREMENTS♣			SOURCE SAMPLE RESULTS					DEQ LAB RESULTS				
	Sample A	Sample B	Sample C	Sample A	Sample B	Sample C	Sample D	Date/Time Analysis set up	Sample A	Sample B	Sample C	Sample D	Date/Time Analysis set up
BOD(1)				6 mg/L				29 Oct 2003 ~1300					
TSS				2.1 mg/L				29 Oct 2003 ~1000					
F^-				7.4 mg/L				29 Oct 2003 ~1000					
Total $PO_4^{\equiv}$				0.2 mg/L				29 Oct 2003 ~1000					
Cr_{Total}(1)				<0.01 mg/L				29 Oct 2003 ~1300					

Sample	Sample point description ♠ (ie. Effluent comp.).	Container number	
		SOURCE	DEQ ♠
A		Combined Effluent	
B			
C			
D			

Fill in your split sample results and mail to:

DEQ Lab
1712 SW 11th Ave.
Portland, OR 97201
Attn: QA Chemist

Shaded area for DEQ use.
♣DEQ sampler enter your field measurements, if taken; indicate whether they are estimates.
♠DEQ sampler is responsible for completing this column.

Need assistance with this form? Contact the QA chemist at (503) 229-5983.

(1) Coffey Laboratories, Inc.

EPD09: MB

siltronic
perfect silicon solutions

Thomas C. McCue
Enviromental Manager
Siltronic Corporation
7200 NW Front Avenue, MS-30
Portland OR 97210-3676, USA
Tel. 503-219-7532
Fax 503-219-7599
Tom.mccue@siltronic.com

Department of Environmental Quality
Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201-4987

February 11, 2004 ER007:MB

Subject: 2003 Air Emissions Report
ACDP No. 26-3002

Enclosed are two copies of the Annual Report for Siltronic Corporation required under our Air Contaminant Discharge Permit (ACDP). The Report of Excess Emissions is included in the body of the Annual Report.

No upset condition incidents were reported to DEQ in 2003.

We estimated 2003 emissions using AP-42 emission factors, natural gas usage (for boilers) and hours of operation (for generators).

If you have any questions, please call Myron Burr at 503-219-7832.

Very truly yours,

SILTRONIC COPRORATION

Thomas C. McCue
Environmental Manager

Cc;
2003 Air Report file
2002 Correspondence file

Wacker Siltronic Corporation
Annual Report for 2003
ACDP No. 26-3002

13a. Quantity of natural gas and diesel oil burned on an annual basis, and resulting criteria pollutant annual emissions:

Natural gas burned: 175.76 million cubic feet

Diesel burned: 128 gallons

Resulting criteria pollutant annual emissions:

Particulate	0.27 tons
CO	3.10 tons
NOx	12.42 tons
SOx	0.06 tons
VOC	0.51 tons

13b. Annual wafer manufacturing NOx emissions:

NOx	6.67 tons

13c. The amount of VOCs emitted on an annual basis:

VOCs	10.52 tons

(includes VOCs from fuel burning and unrecovered VOCs from chemicals used)

13d. The amount of VOC cleaning solvent emitted each month:

January	0.24 tons
February	0.98 tons
March	0.78 tons
April	0.46 tons
May	0.45 tons
June	0.28 tons
July	0.62 tons
August	0.45 tons
September	0.46 tons
October	0.62 tons
November	0.28 tons
December	0.43 tons

Wacker Siltronic Corporation
Annual Report for 2003
ACDP No. 26-3002

13e. The amount of VOC used and amount of VOC waste collected on annual basis:

VOC used	16.35 tons
VOC waste collected	6.34 tons

13f. Emergency diesel generator total hours of operation:

20.3 hours

13g. Log of all planned and unplanned excess emissions in accordance with OAR 340-28-1440:

None.

13h. List all major maintenance performed on air pollution equipment:

9-12-03 Growing Hall Thermal Oxidizer:
Actuator on the main gas-blocking valve failed and was replaced the same day.

siltronic
perfect silicon solutions

Jim Claxton
Environmental Engineer

Siltronic Corporation
7200 NW Front Avenue, MS
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim.claxton@siltronic.com

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER:006 JWC

2004-February-10

Discharge Monitoring Report for January 2004

Dear Dr. Zais:

Enclosed is the January 2004 Discharge Monitoring Report for Wacker Siltronic Corporation NPDES permit number 101128, File Number 93450. Wacker Siltronic has operated in compliance with the Permit for this reporting period and has no discharge violations to report.

If you have any questions, please contact me.

Best regards,

Siltronic Corporation

J Claxton

Jim Claxton
Environmental Engineer

Enclosure:
Discharge Monitoring Report

cc: Tom Rothschild
DMR File

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER (3-16)	DISCHARGE NUMBER (17-19)
101128	Outfall 001

MONITORING PERIOD

FROM YEAR (20-21)	MO (22-23)	DAY (24-25)	TO YEAR (26-27)	MO (28-29)	DAY (30-31)
2004	1	1	2004	1	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	992,000	1,475,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	46.8	56.0	lbs/day	--	6.0	7.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	77.7	121.0	lbs/day	--	10.2	16.5	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	54.8	58.9	lbs/day	--	7.1	8.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Tom Clayton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	NUMBER	DATE YEAR	MO	DAY
503	243-2020	04	2	4

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

SCOEPA00023391

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	1	1	TO	2004	1	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(5-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Wacker Siltronic Corp. by:

Jim Clayton

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 2 | DAY 4

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023392

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2004	1	1	TO	2004	1	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(1 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(1 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	251,000	477,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.2	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Jim Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 2 | DAY 4

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023393

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16) (17-19)
101128 — PERMIT NUMBER
Outfall 003 — DISCHARGE NUMBER

MONITORING PERIOD
FROM YEAR 2004 MO 1 DAY 1 (20-21) (22-23) (24-25)
TO YEAR 2004 MO 1 DAY 31 (26-27) (28-29) (30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,243,000	1,646,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	66.8	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.0	7.2	7.4			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Jim Claxton
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020
DATE: YEAR 04 MO 2 DAY 4

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023394

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:005.JWC

2004-Februaru-10

January 2004 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the January 2004 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

A split sample was taken January 29, 2004. The chain of custody and analytical result for that split sample are enclosed.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Lab Bench sheet for Split Sample taken January 29, 2004
Chain of Custody for Split Sample
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

4640175004
SUSC SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

January-04

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	312,842	(100s of GALLONS)
CURRENT READING	109367	479,223	(100s of GALLONS)
CONSUMPTION	0	166,381	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,663,810	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,663,810	* 10 GAL / 7.48 GAL/CF =	2,224,345	CF
TOTAL THRU' OVERFLOW LINE	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,224,345	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	164,160	(10s of GALLONS)
CURRENT READING	237,105	(10s of GALLONS)
CONSUMPTION	72,945	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	72,945	* 10 GAL / 7.48 GAL/CF=	97,520	CF

This meter reading was reported by: _____ on 2/4/04
C. Justin Darr (date)

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023396

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **February 15, 2004**

SAMPLING PERIOD: January 2004

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C. McCune Date: 2/10/04

C:\WINNT\Profiles\jzc\Temporary Internet Files\OLK2F\Jan2004MonthReport1.doc

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **February 15, 2004**

SAMPLING PERIOD: Split Sample taken 1/29/04

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Total Suspended Solids	EPA 160.8	33 mg/L	0.1	N/A	N/A	Split sample with BES taken Jan 29, 2004

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

Signature: Thomas G. McCue Date: 2/10/04

SCOEPA00023398

WACKER SILTRONIC CORPORATION

CHAIN OF CUSTODY

REPORT TO:

Attn: Thomas Rothschild
7200 N. W. Front Ave.
Portland, Oregon 97210
ph: 243-2020 X-7374
fax: 417-4114

INVOICE TO:

Wacker Siltronic Corporation
Accounts Payable
7200 N.W. Front Ave.
Portland, Oregon 97210
P.O. NUMBER:

Project Name:_____

Analysis Requested

Sample ID #	Date	Time	Matrix (W,S,A,	# of contain	Preser	Comments:
1. 04-10	1-29-04		WW	1	No	
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

RELIQUISHED BY: _____ COMPANY: BES DATE / TIME: 1/29/04 1230

RECEIVED BY: _____ COMPANY: Wacker DATE / TIME: 1/29/04 1250

RELIQUISHED BY: _____ COMPANY: _____ DATE / TIME: _____

RECEIVED BY: _____ COMPANY: _____ DATE / TIME: _____

RELIQUISHED BY: _____ COMPANY: _____ DATE / TIME: _____

SCOEPA00023399

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 1-29-04 Oven Temp: 105 C Analyst: DI

Date In: 1-29-04 Time In/Out: 1200 / 1500

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0865	0.0865	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
6	CE FAB-2	500	0.0920	0.0885	7
7	CE FAB-2	500	0.0919	0.0886	6.6
				Average CE FAB-2 TSS	6.8
8	OWW	100	0.0917	0.0883	34
12	OWW	100	0.0910	0.0878	32
				Average OWW TSS	33
				Average TSS	

Comments: #8+12 OWW split w/ City WS6 # 04-10

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference:
1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

L:\FACLAB\WWTP\BENCH\TSSB.DOC

SCOEPA00023400

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676
Tel. 503 219 7313
Fax 503 219 7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER003:JC

2004-January-13

Discharge Monitoring Report for December 2003

Dear Dr. Zais:

Enclosed is the Decemebr 2003 Discharge Monitoring Report for Wacker Siltronic Corporation NPDES permit number 101128, File Number 93450. Wacker Siltronic has operated in compliance with the Permit for this reporting period and has no discharge violations to report.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Discharge Monitoring Report

cc: Tom Rothschild
DMR File

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

(17-18)

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	12	1	TO	2003	12	31
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(3 Card Only) QUANTITY OR LOADING (54-61) MAXIMUM	(3 Card Only) QUANTITY OR LOADING UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(4 Card Only) QUALITY OR CONCENTRATION (46-53) AVERAGE	(4 Card Only) QUALITY OR CONCENTRATION (54-61) MAXIMUM	(4 Card Only) QUALITY OR CONCENTRATION UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	1,001,000	1,165,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	46.0	58.4	lbs/day	--	5.4	7.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	32.6	82.5	lbs/day	--	3.8	9.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.01	<0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	54.8	58.9	lbs/day	--	6.4	6.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 1 | DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

SCOEPA00023402

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	12	1	TO	2003	12	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 1 | DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023403

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(3-16) (17-19)
101128 PERMIT NUMBER
Outfall 002 DISCHARGE NUMBER

MONITORING PERIOD
FROM YEAR 2003 MO 12 DAY 1 (20-21) (22-23) (24-25)
TO YEAR 2003 MO 12 DAY 31 (26-27) (28-29) (30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	216,000	397,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 04 MO 1 DAY 13

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023404

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 003

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003 (20-21)	12 (22-23)	1 (24-25)	TO	2003 (26-27)	12 (28-29)	31 (30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,218,000	1,339,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	66.7	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	6.9	7.1	7.3			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 04 | MO 1 | DAY 13

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023405

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:002.JWC

2004-January-12

December 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the December 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

One event occurred during this month:

December 8, 2003 at about 6 p.m., Wacker called the BES WWTP lead operator and informed him that we would be diverting additional waste to the City due to a problem at Wacker's wastewater treatment plant. The flow of flocculant to a waste stream was interrupted for a few hours. A waste that normally is discharged to the Willamette River, under Wacker's NPDES permit, was diverted to the City. The diversion lasted for about seven hours.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Lab Bench sheets
Chain of Custody
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **January 15, 2004**

SAMPLING PERIOD: October - December, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
December 2003	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	SM-4508H	SU	0.1	5.0 - 11.5	N/A	
TTOs (Volatiles)	EPA-8260	<0.01 mg/L	0.005	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
December 2003	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	< 0.0025 mg/L	0.0025	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	34.2 mg/L	0.1	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: Thomas C. McCann Date: 1/13/04

SCOEPA00023407

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **January 15, 2004**

SAMPLING PERIOD: December, 2003

For Industrial Source Control Division Use Only	
Date Postmarked/Received	Date Entered
	Entered By:
Comments:	

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C McCann Date: 1/13/04

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 12-4-03 Oven Temp: 104 C Analyst: DI

Date In: 12-4-03 Time In/Out: 1150 / 1406

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0970	0.0970	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0879	0.0873	~~512~~ DI 1.2
3	CE FAB-2	500	0.0934	0.0928	1.2
				Average CE FAB-2 TSS	1.2
4	OWW	100	0.0941	0.0882	59
5	OWW	100	0.0936	0.0878	58
				Average OWW TSS	58.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

SCOEPA00023409

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 12-23-03 Oven Temp: 104 C Analyst: DI

Date In: 12-30-03 Time In/Out: 1000 / 1300

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0867	0.0867	
	CE FAB-1				
	CE FAB-1				
			Average CE FAB-1 TSS		
4	CE FAB-2	500	0.0904	0.0893	2.2
5	CE FAB-2	500	0.0897	0.0884	2.6
			Average CE FAB-2 TSS		2.4
6	OWW	100	0.0910	0.0889	21
7	OWW	100	0.0908	0.0891	17
			Average OWW TSS		19
			Average TSS		

Comments: Sample held in fridge -

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

SCOEPA00023410

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 12-18-03 Oven Temp: 105 C Analyst: DJ

Date In: 12-18-03 Time In/Out: 1010 / 1430

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0864	0.0866	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0930	0.0886	8.8
3	CE FAB-2	500	0.0931	0.0886	9.0
				Average CE FAB-2 TSS	9.2
4	OWW	100	0.0937	0.0897	40
5	OWW	100	0.0934	0.0892	42
				Average OWW TSS	41
6	MV-3	50	0.1036	0.0878	316
7	MV-3	50	0.1094	0.0884	420
				Average TSS	368

Comments: MV-3 grab during cleaning of FAB-2 multi medias - 12/17/03

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference:
1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

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SCOEPA00023411

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 12-11-03 Oven Temp: 105 C Analyst: DI

Date In: 12-11-03 Time In/Out: 1145 / 1320

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0865	0.0865	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0893	0.0884	1.8
3	CE FAB-2	500	0.0888	0.0879	1.8
				Average CE FAB-2 TSS	1.8
4	OWW	100	0.0902	0.0883	19
5	OWW	100	0.0890	0.0872	18
				Average OWW TSS	18.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference:
1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

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SCOEPA00023412

Analytical Data

Wacker Siltronic

Job Number: A31204AX

Lab Sample ID: A31204AX-3
Field ID: 03-138-OWW-C
Date/Time: 12/04/03 0745
Matrix: Waste Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units	Analysis Date	Analyst
Arsenic	EPA 200.8	0.0025	ND	mg/L	12/10/03	CV

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023413

Analytical Data

Wacker Siltronic

Job Number: A31204AX

Lab Sample ID: A31204AX-4
Field ID: 03-139-OWW-G
Date/Time: 12/04/03 0745
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 12/16/03
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	1700. E
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	13.
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	ND
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.
E means Estimated Concentration

Analytical Data

Wacker Siltronic

Job Number: A31204AX

Lab Sample ID: A31204AX-4
Field ID: 03-139-OWW-G
Date/Time: 12/04/03 0745
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 12/16/03
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
1,1-Dichloropropene	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	ND
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND

Results expressed as μg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023415

Analytical Data

Wacker Siltronic

Job Number: A31204AX

Lab Sample ID: A31204AX-4
Field ID: 03-139-OWW-G
Date/Time: 12/04/03 0745
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 12/16/03
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	5.	ND	ND
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
Dibromofluoromethane (Surr.)	---	---	106.%
Toluene-d8 (Surr.)	---	---	98.%
4-Bromofluorobenzene (Surr.)	---	---	96.%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023416

Analytical Data

Wacker Siltronic

Job Number: A31204AX

Lab Sample ID: A31204AX-4
Field ID: 03-139-OWW-G
Date/Time: 12/04/03 0745
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: CLISolventScan; Solvent Scan.
Analysis Date: 12/10/03
Analyst: MKM

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Isopropanol	1.	ND	8.

Results expressed as mg/l unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023417

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon 97210
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: Weekly
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: Di

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ___ of ___
Job Number:
Custabbr: NEW
VISA M/C Cardholder:
Card #: Exp:
Cash / Check / CC $ #
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc	ID		Collection Date	Time	Media	Analysis Requested	Test Profile
03-136-CE-C				12/4/03	0745		BOD, Cr(T)	
03-137-CE-S				12/4/03	0745		8260, 8270, 1-2 Diphenylhydrazine	
03-138-OWW-C				12/4/03	0745		AS	
03-139-OWW-S				12/4/03	0745		8260, 8270 1-2 Diphenylhydrazine IPA	

Sampled By: Dianne Irish
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 12-4-03

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Irish	12-4-03	1020	[signature]	12-4-03	1020

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

12/31/2003

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	123,495	(100s of GALLONS)
CURRENT READING	109367	312,842	(100s of GALLONS)
CONSUMPTION	0	189,347	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,893,470	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,893,470	* 10 GAL / 7.48 GAL/CF =	2,531,377	CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,531,377	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	91,324	(10s of GALLONS)
CURRENT READING	164,160	(10s of GALLONS)
CONSUMPTION	72,836	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	72,836	* 10 GAL / 7.48 GAL/CF=	97,374	CF

This meter reading was reported by: C. Justin Darr on 1/2/04
C. Justin Darr — date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
Portland, Oregon 97203-5452

SCOEPA00023419

WACKER
Wacker Siltronic Corporation

February 9, 2001 ER:006 JWC

Tim Dean
Bureau of Environmental Services
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the January, 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-655-3710

Very truly yours,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023420

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **February 15, 2001**

SAMPLING PERIOD: January, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	761	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C. McCue

Date: 2/12/01

Thomas C. McCue, Manager, Environmental Engineering

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

WACKER
Wacker Siltronic Corporation

February 9, 2001 ER:007 JWC

Tim Dean
Bureau of Environmental Services
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the January, 2001 Split Sample Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01.

If you have any questions, please contact Jim Claxton @ 503-655-3710

Very truly yours,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:

(1) Copy of Analytical Results from Testing Lab
(2) Copy of Sample Chain of Custody
(3) Self-Monitoring Report Form for Split Sample Results

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023422

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: February 15, 2001

SAMPLING PERIOD: January, 2001

Split Sample Program

For Industrial Source Control Division Use Only	
Date Postmarked/Received	Date Entered
	Entered By:
Comments:	

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH		SU		5.0 - 11.5	N/A	N/A
TTOs (Volatiles)		N/A mg/L		1.37 mg/L	N/A	N/A

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
/01	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic	EPA 200-8	ND mg/L	0.005 mg/L	0.2 mg/L	0.83 mg/L	Split Sample
Molybdenum	EPA 200-8	0.03 mg/L	0.01 mg/L	1.4 mg/L	N/A	Split Sample

~~Based on my inquiry~~ of the person or persons directly responsible for managing compliance with the pretreatment standard for total ~~toxic~~ organics (TTO), I certify ~~that, to the best of my knowledge and belief,~~ no dumping of concentrated toxic organics into the wastewaters has occurred since filing ~~the last~~ discharge monitoring report. I further certify that this facility ~~is implementing the toxic organic management~~ plan ~~submitted~~ to the control authority. N/A

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

Signature: Thomas C. McCue Date: 2/12/01

Thomas C. McCue, Manager, Environmental Engineering

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Thomas J. Rothschild
Company Name: Wacker Siltronic Corp.
Mailing Address: 7200 NW Front Avenue
Portland, Oregon 97210
Phone: (503) 248-7020 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 44500075182
Project Number: 01-11
Project Name: —
EPA Protocol Containers: (Y)/N Other:

Sample Turnaround
- [X] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: JJR

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date / Time		Media	Analysis Requested	Test/ Profile
~~00-119~~								
01-119 OWW composite				24 Jan 2001	0910	water	Arsenic, Molybdenum	
00-119				[illegible]	[illegible]	[illegible]		

Sampled By: Thomas J. Rothschild
AUTHORIZED CUSTOMER SIGNATURE Thomas J. Rothschild DATE: 24 January 2001

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	[illegible] BES	4/24/01	0910	Thomas J. Rothschild	24 Jan 01	0910
				Bill Hyde	1-25-01	1615
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

RECEIVED FEB 7 2001

Report Date: January 30, 2001
Job Number: A10125BL
PO Number: 4500075102
Project No: None Provided
Project Name: 01-11

Tom Rothschild
Wacker Siltronic
P.O. Box 83180
Portland, OR 97283

Analytical Narrative

The sample was received on 01/25/01 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A10125BL-1	01-11 - OWW Composite	Waste Water	01/24/01	0910

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Technical Services

TS /atc

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A10125BL

Lab Sample ID: A10125BL-1
Field ID: 01-11 - OWW Composite
Date/Time: 01/24/01 0910
Matrix: Waste Water

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units	Analysis Date	Analyst
Arsenic	EPA 200.8	0.005	ND	mg/L	01/27/01	CFS
Molybdenum	EPA 200.8	0.01	0.03	mg/L	01/27/01	CFS

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	1	1	TO	2001	1	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	1,056,000	1,153,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	63.0	70.2	lbs/day	--	7.3	8.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	19.4	24.6	lbs/day	--	2.2	2.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	62.5	69.3	lbs/day	--	7.2	7.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.3	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 01 MO 2 DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER: 008

SCOEPA00023427

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	1	1	TO	2001	1	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	< 0.1	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 2 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023428

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	1	1	TO	2001	1	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	123,000	245,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.6	1.9	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 2 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023429

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	1	1	TO	2001	1	31

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	MAXIMUM (54-61)	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,180,000	1,283,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	66.7	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.2	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes are certain fines up to $10,000 and certain imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 2 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

L:\ENVIRONMENTAL\NPDES\NPDESPER.DOC

SCOEPA00023430

CITY OF PORTLAND ENVIRONMENTAL SERVICES

Water Pollution Control Laboratory
6543 N. Burlington Ave., Portland, Oregon 97203-5452
(503) 823-5600

SPLIT SAMPLE AUTHORIZATION FORM

Company name Wacker Siltronic Corp.
Address 7200 NW Front Avenue, Portland, OR 97210-3676

Primary Contact Tom Rothschild
Title Facilities Chemist Phone 503 219-7374
Secondary Contact Dianne Irish
Title Maintenance Technician Phone 503 219-7274
Admission procedures City of Portland, Field Operations shall call the primary and/or the secondary contacts shown above, prior to arriving on-site. If neither contact can be reached by using the phone numbers above, Field Operations shall contact Wacker Security at phone 503 219-7421. Wacker Security shall call the contacts above by radio on Channel 3 at R-6 (Rothschild) or R-2 (Irish).

Agreements:

I have read the City of Portland's split sample policy and understand all requirements and agree to follow the conditions outlined in the policy. I further agree to notify our private laboratory of the chain of custody requirements and will ensure their proper use by the laboratory. I understand that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Responsible official Thomas C. McCue

Title ENVIRONMENTAL MANAGER
Date 23 day of FEB 2001

S:\FORMS\SPLT-SPL.FRM

ER cc 9 Jw C

SCOEPA00023431

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, OR 97203-5452

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* L K. WESTERBERG B. Date of Delivery 4/27/01

C. Signature
X Kwesterberg ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)* 7000 0520 0024 3444 27.

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7000 0520 0024 3444 2737

Postage	$ 34
Certified Fee	1.90
Return Receipt Fee (Endorsement Required)	1.50
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$3.74

Clayton

Postmark Here

Tim Dean, Bureau of Enviro Svcs, City of Portland
6543 N. Burlington Avenue
Portland, OR 97203-5452

PS Form 3800, February 2000 See Reverse for Instructions

Certified Mail Provides:

- A mailing receipt
- A unique identifier for your mailpiece
- A signature upon delivery
- A record of delivery kept by the Postal Service for two years

Important Reminders:

- Certified Mail may ONLY be combined with First-Class Mail or Priority Mail.
- Certified Mail is not available for any class of international mail.
- NO INSURANCE COVERAGE IS PROVIDED with Certified Mail. For valuables, please consider Insured or Registered Mail.
- For an additional fee, a Return Receipt may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested". To receive a fee waiver for a duplicate return receipt, a USPS postmark on your Certified Mail receipt is required.
- For an additional fee, delivery may be restricted to the addressee or addressee's authorized agent. Advise the clerk or mark the mailpiece with the endorsement "Restricted Delivery".
- If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail.

IMPORTANT: Save this receipt and present it when making an inquiry.

PS Form 3800, February 2000 (Reverse) **102595-00-M-1489**

SCOEPA00023434

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

Jim Claxton
Environmental Engineer
Wacker Siltronic Corp.
7200 NW Front Avenue, Mail Stop 30
Portland, OR 97210-3676

97210+3676

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, OR 97203-5452

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* L. K. WESTERBERG B. Date of Delivery 2/27/01

C. Signature
x L. K. Westerberg ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)* 7000 0520 0024 3444 27

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER	DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	2	1	TO	2001	2	28

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		(3 Card Only) QUANTITY OR LOADING AVERAGE	MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Process Waste Water Flow	SAMPLE MEASUREMENT	1,045,000	1,132,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	54.8	74.0	lbs/day	--	6.3	8.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	17.5	24.8	lbs/day	--	2.0	2.8	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	54.5	59.2	lbs/day	--	6.3	6.5	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.3	0.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
thomas a McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 3 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being done on site.

ER 010 Jwc

SCOEPA00023437

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	2	1	TO	2001	2	28

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1001 AND 33 USC 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 3 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023438

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-10) PERMIT NUMBER	(11-15) DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR (30-31)	MO (32-33)	DAY (34-35)		YEAR (36-37)	MO (38-39)	DAY (40-41)
FROM	2001	2	1	TO	2001	2	28

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	136,000	280,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 3 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023439

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-10) 101128 PERMIT NUMBER	(11-15) Outfall 003 DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	2	1	TO	2001	2	28
	(16-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(1 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(1 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,181,000	1,313,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	67.2	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.2	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 3 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023440

WACKER
Wacker Siltronic Corporation

March 9, 2001 ER:011 JWC

Tim Dean
Bureau of Environmental Services
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the February, 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-655-3710

Very truly yours,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **March 15, 2001**

SAMPLING PERIOD: February, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	FOXBORO	761	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas A McCann Date: 3/12/01

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

PERMITTEE NAME/ADDRESS (Include Facility Name/Location - If different)
NAME: Wacker Siltronic Corporation
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY: 7200 NW Front Ave.
LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
10112[illegible]	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	3	1	TO	2001	3	31
	(18-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	1,015,000	1,178,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	41.7	52.8	lbs/day	--	4.8	6.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	18.1	31.5	lbs/day	--	2.1	3.5	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	0.01	0.03	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	63.2	72.3	lbs/day	--	7.3	8.3	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1001 AND 33 USC 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 01 MO 4 DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being done on site.

ER: 012

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-16 WHICH MAY NOT BE USED.)

SCOEPA00023443

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
10112[illegible]	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	3	1	TO	2001	3	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 01 MO 4 DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023444

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(3-16) PERMIT NUMBER	(17-18) DISCHARGE NUMBER
10112[redacted]	Outfall 002

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	3	1	TO	2001	3	31
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	107,000	158,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.3	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 4 | DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023445

PERMITTEE NAME/ADDRESS (Include Facility Name/Location, if different)
NAME: Wacker Siltronic Corporation
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY: 7200 NW Front Ave.
LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER	DISCHARGE NUMBER
101123	Outfall 003

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	3	1	TO	2001	3	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Outfall flow	SAMPLE MEASUREMENT	1,122,000	1,327,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	68.5	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.0	7.8	10.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1001 AND 33 USC 1319 (Penalties under these statutes may include fines up to $10,000 per violation, imprisonment of between 6 months and 3 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 4 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
3/9/01: 1 minutes 6 seconds excursion of a ph of 10.0. ✓

SCOEPA00023446

WACKER
Wacker Siltronic Corporation

April 9, 2001 ER:013 JWC

Tim Dean
Bureau of Environmental Services
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the March, 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-655-3710

Very truly yours,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **April 15, 2001**

SAMPLING PERIOD: March, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C. McCue Date: April 10, 2001

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **APRIL 15, 2001**

SAMPLING PERIOD: January - March, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
March 2001	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	EPA 150.1	No Excursions SU	0.1	5.0 - 11.5	N/A	
TTOs (Volatiles)	EPA 8260	0.01 mg/L	0.01	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	0.005 mg/L	0.005	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.2	135 mg/L	0.1	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: Thomas G McCue Date: April 10, 2001

SCOEPA00023449

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3-1-01 Oven Temp: 105 C Analyst: DV

Date In: 3.2.01 Time In/Out: 1115 / 1400

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0916	0.0916	0
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2	400	0.0924	0.0916	2
5. CE FAB-2	400	0.0926	0.0918	2
		Average CE FAB-2 TSS		2
6. OWW	50	0.0989	0.0925	128
7. OWW	50	0.0990	0.0919	142
		Average OWW TSS		~~132~~ D. 135
8.				
9.				
		Average TSS		

Comments: _____

_____

_____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. NPDES Permit #101128.

TJR 21 Mar 87
DEM 11 Jan 2000 Revised

SCOEPA00023450

Analytical Data

Wacker Siltronic

Job Number: A10301BP

Lab Sample ID: A10301BP-3
Field ID: 01.32
Date/Time: 03/01/01 0730
Matrix: Liquid

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units
Arsenic	EPA 200.8	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A10301BP

Lab Sample ID: A10301BP-4
Field ID: 01.33 OWWgrab
Date/Time: 03/01/01 0730
Matrix: Liquid

EPA Category: Volatile Organics
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/10/01
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	2900. E
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	ND
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	ND
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.
E means Estimated Concentration.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A10301BP

Lab Sample ID: A10301BP-4
Field ID: 01.33 DWW - grab
Date/Time: 03/01/01 0730
Matrix: Liquid

EPA Category: Volatile Organics
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/10/01
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
1,1-Dichloropropene	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	ND
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023453

Analytical Data

Wacker Siltronic

Job Number: A10301BP
Page Number: 13 of 14

Lab Sample ID: A10301BP-4
Field ID: 01.33 OWW - grab
Date/Time: 03/01/01 0730
Matrix: Liquid

EPA Category: Volatile Organics
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/10/01
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	5.	ND	ND
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
4-Bromofluorobenzene (Surr.)	---	---	104%
Dibromofluoromethane (Surr.)	---	---	108%
Toluene-d8 (Surr.)	---	---	100%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W Front Ave
Portland, OR
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 01-30-33
Project Name:
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: DR

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐NEW

☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Time	Media	Analysis Requested	Test/ Profile
01-30				3-1-01	0730	liquid	Cr(T) - BOD	
01-31				3-1-01	0730	liquid	8260/8270 1-2 Diphenylhydrazine	
01-32				3-1-01	0730	Liquid	As Arsenic	
01-33				3-1-01	0730	Liquid	IPA - 8260	

Sampled By: Dianne Thrush
AUTHORIZED CUSTOMER SIGNATURE Dianne Thrush DATE: 3-1-01

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
CrT = 0.001ppm detect - IPA = 1.0pppm detect	Dianne Thrush	3-1-01		E. Miller	3-1-01	1030
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

WACKER

Wacker Siltronic Corpora

April 11, 2001

Dr. Elliot Zais
Water Quality Source Control
Dept. of Environmental Quality
State of Oregon, NW Region
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201-4987

ER:014TM

RE: Annual Bioassay Results

Dear Dr. Zais:

Previously reported evaluations of bioassay test results submitted in our October 2000 DMR were over-reported and did not take into account the correct dilution data to describe the effluent concentration within the zone of immediate dilution and the dilution at the edge of the mixing zone. This effected the test results and the percent of effluent used to determine the no observable effect concentration (NOEC). Using actual dilution data from three mixing zone studies, Wacker Siltronic Corporation is currently in compliance with all NPDES permit conditions in Schedule D, Section 6, Bioassay requirements.

The error occurred when we failed to take into account the effluent dilution data produced by the mixing zone studies when conducting the bioassay testing. Data used for effluent dilution determination up to this point were early estimated dilution values suggested in 1994 before the ZID was established in the permit.

A total of three mixing zone studies have been performed at the outfall in the years 1994, 1995, and 1999. These studies have been submitted to DEQ in the past. Each of these studies model the dilution conditions within the mixing zone and at the edge of the mixing zone. This data is used to define the pass/fail criteria for bioassay tests.

All mixing zone data that is valid for the existing permit has been used to calculate the average dilution a 5 foot radius for the ZID and at a 50 foot radius for the edge of the mixing zone. All dilution data points are based on 7Q10 worst case low flow conditions at 0.1 feet per second current velocity during both average and maximum permitted discharge volumes. Under these conditions the NOEC test criteria is:

Acute: NOEC $\geq$13.4% effluent (10-17.5% based on ZID dilutions of 5.7-10)

Chronic: NOEC $\geq$1.8% effluent (1.5-3.0% based on mixing zone dilutions of 33-72)

Test results have been re-evaluated based on the above average effluent dilutions:

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023456

WACKER

Wacker Siltronic Corpora

Test Date (2000)	Test	Ceriodaphnia dubia Survival (% Effluent)	Pimephales promelas Survival (% Effluent)
Aug 8-15	Acute NOEC	17%	100%
	Chronic NOEC	<3%	<3%
Oct 10-17	Acute NOEC	50%	100%
	Chronic NOEC	3%	100%
Dec 5-12	Acute NOEC	50%	100%
	Chronic NOEC	<6.25	100%

The bioassay tests conducted in October and December pass under all mixing zone conditions. The August bioassay test appears to pass but a lack of data at the lower concentration make the results questionable. Future bioassay tests will be conducted at lower effluent concentrations to bracket the test criteria.

A Toxicity Identification Evaluation study has been conducted on the total effluent and upstream from the discharge point to determine the cause for periodic test failures. Testing is ongoing and it is hoped that it will assist in the design of long term solutions.

If you have any questions, please contact me at 503-219-7532

Very truly yours,

Wacker Siltronic Corporation;

Thomas C McCue

Thomas C. McCue
Environmental Manager

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

WACKER
Wacker Siltronic Corporation

May 9, 2001 ER:018 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the April, 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Sincerely,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **May 15, 2001**

SAMPLING PERIOD: April, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C. McCue Date: May 10, 2001

Thomas C. McCue, Environmental Manager

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

SCOEPA00023459

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-16) 101128 PERMIT NUMBER
(17-19) Outfall 001 DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	4	1	TO	2001	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (46-53) MINIMUM	(54-61) AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	950,000	1,115,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	35.9	41.6	lbs/day	--	4.5	5.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	19.5	25.1	lbs/day	--	2.5	3.3	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	54.6	59.7	lbs/day	--	6.9	7.5	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 01 MO 5 DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome Batches are no longer being done on site.

ER : 019

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(3-16)	(17-18)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	4	1	TO	2001	4	30
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(4 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to additional imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	01	5	9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023461

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(5-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	4	1	TO	2001	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	96,000	171,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Thomas McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
			1	
503	243-2020	01	5	9
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023462

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	4	1	TO	2001	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,046,000	1,231,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	70.4	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 per violation, imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 5 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023463

WACKER
Wacker Siltronic Corporation

June 13, 2001 ER:027 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the May 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. May 22 Wacker Siltronic was out of compliance with Permit requirements. A slug discharge was reported to the Lead Operator at CBWTP and with the IDS Duty Officer.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Sincerely,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **June 15, 2001**

SAMPLING PERIOD: May, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
May 22, 2001	1745	11.8	55.4	(YES)	NO	Loss of power
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR WACKER SILTRONIC CORP:

Signature: Thomas C. McCue Date: June 12, 2001

Thomas C. McCue, Environmental Manager

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

SCOEPA00023465

ER 628 [redacted]

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16) (17-19)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	5	1	TO	2001	5	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(1 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(1 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	869,000	1,087,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	36.5	73.8	lbs/day	--	4.8	9.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	15.6	17.7	lbs/day	--	2.2	3.4	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.01	<0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	53.3	67.5	lbs/day	--	7.1	8.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.5	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 6 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being done on site.

SCOEPA00023466

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(3-16) (17-19)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	5	1	TO	2001	5	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61)			(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas G. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	01	6	11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023467

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16) (17-19)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	5	1	TO	2001	5	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(5-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (66-69)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	125,000	259,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.4	mg/l		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 6 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023468

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY LOCATION: 7200 NW Front Ave.
Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	5	1	TO	2001	5	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	994,000	1,224,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	70.1	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	11.1			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to additional imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:

Thomas C McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 6 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

5-22-01: TIME: 54 MINS. PH: 11.1 OUTAGE DUE TO TEMP. ELECTRICITY SHUTDOWN TO THE PH ANALYSER.
5-23-01: TIME: 11 MINS. POWER OUTAGE. GRAB SAMPLING INDICATES IN COMPLIANCE

WACKER
Wacker Siltronic Corporation

June 29, 2001

ER030:PH

Dennis Jeurries
Dept. of Environmental Quality
State of Oregon, NW Region
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201

RE: Annual Stormwater Monitoring Data, October 2000 and April 2001

Dear Mr. Jeurries:

Enclosed is the storm water monitoring data as required by Wacker Siltronic's NPDES Storm Water Discharge Permit 1200-Z, issued December 23, 1997. Sampling was conducted on November 29, 2000 and April 20, 2001, meeting the requirement of conducting two monitoring events per sample point between July 1 and June 30.

All results were well below the benchmark guideline concentrations, with the exception of TSS, at the North sample point, on April 20, 2001. TSS was re-sampled as soon as possible, on April 30, 2001, resulting in a TSS concentration of 58 mg/L, well below the TSS benchmark of 130 mg/L.

Although we believe this was an isolated incident, we have included this excursion in the Environmental Corrective Action System and have taken actions to help assure compliance with the TSS benchmark. We are also reviewing our Storm Water Pollution Control Plan. Any revisions will be submitted to you and John Holtrop.

Per our June 20, 2000 telephone conversation with John Holtrop of the City of Portland, we have submitted the summarized sampling results, analytical reports, QA/QC data, bench sheets, and chain of custody forms.

If you have any questions, please contact Petra Hoy at (503) 219-4469.

Sincerely,

WACKER SILTRONIC CORPORATION

Thomas C. McCue,
Environmental Manager

c: John Holtrop – BES, City of Portland #ER031:PH
Tom Rothschild – Facilities Chemist, Wacker Siltronic Corp.
SW Report 2000 File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 219-7532
Fax (503) 219-7599

SCOEPA00023470

Bureau of Environmental Services

Industrial Source Control Division

INDUSTRIAL STORMWATER

NPDES 1200-Z MONITORING REPORT

Industry Name: Wacker Siltronic Corp.

Site Address: 7200 NW Front Avenue, Portland, OR 97210-3676

The permittee shall monitor stormwater **twice** per year for the parameters outlined in their NPDES 1200-Z Stormwater Discharge Permit Schedule B.1.a., and submit results to the City as stated in Schedule D.2.

Stormwater samples were taken for the above permittee, on these days and at these sample points:

Sample Date(s)	Sample Point(s)
November 29, 2000	North, South, East
April 20, 2001	North, South, East

The permittee shall submit by **July 15** of each year a copy of the **laboratory analysis reports**, which show analytical methods and detection limits, for stormwater samples collected for the previous monitoring year (July 1-June 30).

☐ **Monitoring Waiver Reduction Notification:**
Check the box if your facility is exercising a waiver of monitoring based on meeting benchmarks listed in Schedule A.9., AND site conditions have not changed to impact stormwater run-off. Note: This does not exclude your facility from notifying DEQ about the waiver of monitoring. Please read Schedule B of the permit to clearly understand the monitor waiver reduction guidelines. If waiver request is for select pollutants, list the parameters excluded from monitoring: _____.

☐ **No Exposure Certification:**
Check the box if your facility is required to have a NPDES 1200-Z permit, but monitoring is not required due to no exposure of stormwater to industrial activities. This no exposure certification is outlined in Schedule B.3.b, and the facility meets the requirements of Schedule B.1.e. Note: This does not exclude your facility from notifying DEQ.

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

Signature: Thomas C McCue

Thomas C. McCue

Title: Environmental Manager

Date: 7/9/01

SCOEPA00023471

Total Copper mg/l

	11/29/00	4/20/01
North	<0.05	0.05
South	<0.05	<0.05
East	<0.05	0.03
Benchmark & Sample Date	0.1	0.1

Total Lead mg/l

	11/29/00	4/20/01
North	<0.005	0.007
South	<0.005	<0.005
East	<0.005	<0.005
Benchmark & Sample Date	0.4	0.4

Total Zinc mg/l

	11/29/00	4/20/01
North	0.33	0.39
South	0.30	0.29
East	0.33	0.26
Benchmark & Sample Date	0.6	0.6

pH S.U.

	11/29/00	4/20/01
North	6.97	6.4
South	6.95	6.3
East	6.97	6.4
Lower Benchmark & Sample Date	5.5	5.5
Upper Benchmark & Sample Date	9	9

TSS mg/l

	11/29/00	4/20/01	4/30/01
North	6.88	207	58
South	4.38	19	
East	3	10	
Benchmark & Sample Date	130	130	130

Oil and Grease mg/l

	11/29/00	4/20/01
North	<3.0	<3.0
South	<3.0	<3.0
East	<3.0	<3.0
Benchmark & Sample Date	10	10

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: North (outfall) Sample ID#: 00-125

Date: 11/29/00 Time: 0815 Sampled by: Dianne Irish

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: _____ F-, mg/L: _____ pH: 6.97

TSS, mg/L: 6.88 Nitrate, mg/L: _____

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3 mg/L (1)

Metals(EPA 200.8), mg/L:

Copper: < 0.05 (1) Lead: < 0.005 (1) Zinc: 0.33 (1)

Notes:
(1) @ Coffey Laboratories, Inc.

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 11/29/00 Oven Temp: 105 C Analyst: DJ

Date In: 12/01/00 Time In/Out: 1100 / 1500

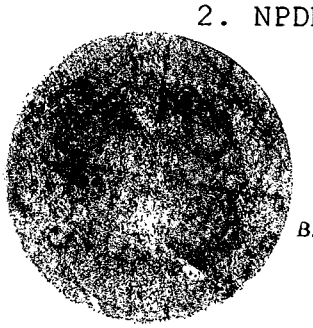
Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0916	0.0916	
2. CE FAB-1	200			
3. CE FAB-1	200			
			Average CE FAB-1 TSS	
4. CE FAB-2				
5. CE FAB-2				
			Average CE FAB-2 TSS	
6. OWW	50			
7. OWW	50			
			Average OWW TSS	
8. 00.125	400	0.0943	0.0919	6
9. 00.125	400	0.0935	0.0904	7.75
			Average TSS	6.88

Comments: Storm water sample Month # 00.125

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. NPDES Permit #101128.



B.DOC

TJR 21 Mar 87
DEM 11 Jan 2000 Revised

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: South (Nox) Sample ID#: 00-126

Date: 11/29/00 Time: 0930 Sampled by: JR, GK

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:___ No: X Floating Solids: yes:___ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: _____ F-, mg/L: _____ pH: 6.95

TSS, mg/L: 4.38 Nitrate, mg/L: _____

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3 (1)

Metals(EPA 200.8), mg/L:

Copper: < 0.05 (1) Lead: <0.005(1) Zinc: 0.3 (1)

Notes:
(1) Coffey Laboratories, Inc.

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 11-29-00 Oven Temp: 105 C Analyst: DO

Date In: 12-01-00 Time In/Out: 1100 / 1500

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0916	0.0916	
2. CE FAB-1	200			
3. CE FAB-1	200			
			Average CE FAB-1 TSS	
4. CE FAB-2				
5. CE FAB-2				
			Average CE FAB-2 TSS	
6. OWW	50			
7. OWW	50			
			Average OWW TSS	
8. 00.126	400	0.0934	0.0915	4.75
9. 00.126	400	0.0926	0.0910	4
			Average TSS	4.38

Comments: Storm water South #00.126

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
NPDES Permit #101128.

TJR 21 Mar 87
DEM 11 Jan 2000 Revised

L:\F. JC

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: East (River) Sample ID#: 00-127

Date: 11/29/00 Time: 0945 Sampled by: Tom Rothschild, Gary Kent

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes: ~~X~~ No: X Floating Solids: yes: ___ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: ___ F-, mg/L: ___ pH: 6.97

TSS, mg/L: 3 Nitrate, mg/L: ___

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3 (1)

Metals(EPA 200.8), mg/L:

Copper: <0.05 (1) Lead: <0.005 (1) Zinc: 0.33 (1)

Notes:
(1) Coffey Laboratories, Inc.

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 11/29/00 Oven Temp: 105 C Analyst: DD

Date In: 12/01/00 Time In/Out: 1100 / 1500

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0916	0.0916	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
8. 00.127	400	0.0925	0.0912	3.25
9. 00.127	400	0.0917	0.0906	2.75
		Average TSS		3

Comments: Storm Water East #00.127

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. NPDES Permit #101128.

TJR 21 Mar 87
DEM 11 Jan 2000 Revised

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SCOEPA00023478

RECEIVED DEC 1 3 2000

Report Date: December 11, 2000
Job Number: A01130AK
PO Number: 4500075102
Project Name: Stormwater Fall 2000

Tom Rothschild
Wacker Siltronic
P.O. Box 83180
Portland, OR 97283

Analytical Narrative

The sample was received on 11/30/00 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A01130AK-1	00-125 North	Storm Water	11/29/00	0815
A01130AK-2	00-126 South	Storm Water	11/29/00	0930
A01130AK-3	00-127 East	Storm Water	11/29/00	0945

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Technical Services

TS /atc

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A01130AK

Lab Sample ID: A01130AK-1
Field ID: 00-125
Date/Time: 11/29/00 0815
Matrix: Storm Water

EPA Category: Conventional Parameters

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L

ND means none detected at or above the detection limit listed.

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SCOEPA00023480

Analytical Data

Wacker Siltronic

Job Number: A01130AK

Lab Sample ID: A01130AK-1
Field ID: 00-125
Date/Time: 11/29/00 0815
Matrix: Storm Water

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units
Copper	EPA 220.1	0.05	ND	mg/L
Lead	EPA 239.2	0.005	ND	mg/L
Zinc	EPA 289.1	0.02	0.33	mg/L

ND means none detected at or above the detection limit listed.

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Analytical Data

Wacker Siltronic

Job Number: A01130AK

Lab Sample ID: A01130AK-2
Field ID: 00-126
Date/Time: 11/29/00 0930
Matrix: Storm Water

EPA Category: Conventional Parameters

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L

ND means none detected at or above the detection limit listed.

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Analytical Data

Wacker Siltronic

Job Number: A01130AK

Lab Sample ID: A01130AK-2
Field ID: 00-126
Date/Time: 11/29/00 0930
Matrix: Storm Water

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units
Copper	EPA 220.1	0.05	ND	mg/L
Lead	EPA 239.2	0.005	ND	mg/L
Zinc	EPA 289.1	0.02	0.3	mg/L

ND means none detected at or above the detection limit listed.

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SCOEPA00023483

Analytical Data

Wacker Siltronic

Job Number: A01130AK

Lab Sample ID: A01130AK-3
Field ID: 00-127
Date/Time: 11/29/00 0945
Matrix: Storm Water

EPA Category: Conventional Parameters

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L

ND means none detected at or above the detection limit listed.

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SCOEPA00023484

Analytical Data

Wacker Siltronic

Job Number: A01130AK

Lab Sample ID: A01130AK-3
Field ID: 00-127
Date/Time: 11/29/00 0945
Matrix: Storm Water

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units
Copper	EPA 220.1	0.05	ND	mg/L
Lead	EPA 239.2	0.005	ND	mg/L
Zinc	EPA 289.1	0.02	0.33	mg/L

ND means none detected at or above the detection limit listed.

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COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, OR
Phone: (503) 219-7374 FAX: (503) 417-4144
Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: Storm Water - Fall - 2000
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additional Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: JJR

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ___ of ___
Job Number: GCA01130AK-5
Custabbr: WackerSilt ☐NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Collection Time	Media	Analysis Requested	Test/Profile
00-125	248	1-3i		11/29/00	0815	W	Oil/Grease - EPA 1664 - / Cu, Pb, Zn EPA 200.8	
00-126	005	1-3j		11/29/00	0930	W	Oil/Grease - EPA 1664 / Cu, Pb, Zn EPA 200.8	
00-127				11/29/00	0945	W	Oil/Grease - EPA-1664 / Cu, Pb, Zn EPA 200.8	
*2 00-129	T1	4x		11/30/00	0815	W	BOD's	
*2 00-130 (1)	005	8y		11/30/00	0815	W	Chromium, Total	

Sampled By: Tom Rothschild, Gary Kent, Dianne Irish AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 11/29/00

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
(1) Request Detection Limit = 0.001 mg/L.				[signature]	11-30-00	1000
				LAB [signature]	11/30/00	1400

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

*2 } changed turn around time to 6 day - w/mark L. on 12-5-00 DJ

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	20 April 2001 (1000 - 1100)	
			North 01-47	South 01-48	East 01-49
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:	4.20.01	
			North 01-47	South 01-48	East 01-49
Total Copper	0.1	Mg/l	0.05	<0.05	~~0~~0.03
Total Lead	0.4	Mg/l	0.007	<0.005	<0.005
Total Zinc	0.6	Mg/l	0.39	0.29	0.25
pH	5.5-9	Su	6.4	6.3	6.4
TSS	130	Mg/l	207 / 58 *	19	10
Oil and Grease	10	Mg/l	<3.0	<3.0	<3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

* TSS for 01-47 was a resample. 4/30/01

SCOEPA00023487

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: North Sample ID#: ~~00-47~~ 01.47 Di

Date: 20Apr20d Time: 1015 Sampled by: SJA/KL/FT

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:___ No: ✓ Floating Solids: yes:___ No: ✓

IN HOUSE ANALYTICAL DATA:

COD, mg/L: _____ F-, mg/L: ___ pH: 6.4

TSS, mg/L: 207.25 Nitrate, mg/L: _____

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3.0

Metals (EPA 200.8), mg/L:

Copper: 0.05 Lead: 0.007 Zinc: 0.39

Notes: - Resampled on 4/30/01 to retest TSS - Results: 57.5 mg/L

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 4·20·01 Oven Temp: 104 C Analyst: DC

Date In: 4·24·01 Time In/Out: 1410 / 1330 (4·25·01)

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0914	0.0914	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
28. #01.47	200	0.1314	0.0927	193.5
36. #01.47	200	0.1372	0.0930	221
		Average TSS		207.25

Comments: Storm Water Sample North #01.47

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

N NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Standard Methods for the Examination of Water and astewater, 1998, 20th Edition, Section 2540 D, age 2-57.
NPDES Permit #101128.

TJR 21 Mar 87
DEM 11 Jan 2000 Revised

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SCOEPA00023489

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 4/30/01 Oven Temp: 104 C Analyst: Di

Date In: 4/30/01 Time In/Out: 1340 / 0840 5/1/01

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0914	0.0914	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
10 8. North	200	0.1026	0.0914	56
11 8. North	200	0.1038	0.0920	59
		Average TSS		57.5

Comments: North storm water sample - resampled due to original high TSS

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

R[illegible]1. Standard Methods for the Examination of Water and [illegible]astewater, 1998, 20th Edition, Section 2540 D, [illegible]ge 2-57.
[illegible]PDES Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: South Sample ID#: 01-48

Date: 20 Apr 2000 Time: 1030 Sampled by: JJR/KL/FT

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: ✓ Floating Solids: yes:____ No: ✓

IN HOUSE ANALYTICAL DATA:

COD, mg/L: _____ F-, mg/L: _____ pH: 6.3

TSS, mg/L: 19 Nitrate, mg/L: _____

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3.0

Metals(EPA 200.8), mg/L:

Copper: < 0.05 Lead: < 0.005 Zinc: 0.29

Notes:

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 4.20.01 Oven Temp: 104 C Analyst: DI

Date In: 4.24.01 Time In/Out: 1410 / 1330 (4.25.01)

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0914	0.0914	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
4R. 01-48	200	0.0963	0.0925	19
5R. 01-48	200	0.0953	0.0915	19
		Average TSS		19

Comments: Storm water South FT 01-48

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
. NPDES Permit #101128.

TJR 21 Mar 87
DEM 11 Jan 2000 Revised

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SCOEPA00023492

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: East Sample ID#: 01-49

Date: 20Apr2001 Time: 1145 Sampled by: JJR/KL/FT

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:___ No: ✓ Floating Solids: yes:___ No: ✓

IN HOUSE ANALYTICAL DATA:

COD, mg/L: _____ F-, mg/L: _____ pH: 6.4

TSS, mg/L: 10 Nitrate, mg/L: _____

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3.0

Metals(EPA 200.8), mg/L:

Copper: ~~<~~ 0.03 Lead: <0.005 Zinc: 0.26

Notes:

_____

_____

_____

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 4.20.01 Oven Temp: 104 C Analyst: DC

Date In: 4.24.01 Time In/Out: 1410 / 1330 (4.25.01)

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0914	0.0914	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
6. #01-49	200	0.0938	0.0921	8.5
7. #01.49	200	0.0947	0.0924	11.5
		Average TSS		10

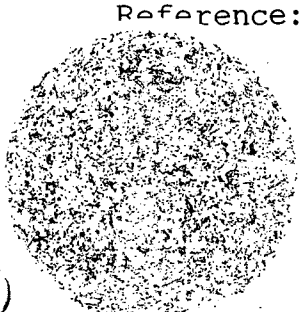
Comments: Storm Water East #01.49

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. NPDES Permit #101128.

TJR 21 Mar 87
DEM 11 Jan 2000 Revised



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SCOEPA00023494

RECEIVED MAY 4 2001

Report Date: April 27, 2001
Job Number: A10420AI
PO Number: 4500075102
Project No: None Provided
Project Name: None Provided

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 04/20/01 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A10420AI-1	01-47 Stormwater - North	Storm Water	04/20/01	1015
A10420AI-2	01-48 Stormwater - South	Storm Water	04/20/01	1030
A10420AI-3	01-49 Stormwater - East	Storm Water	04/20/01	1045

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

John A. Guild

Technical Services

TS /atc

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A10420AI

Lab Sample ID: A10420AI-1
Field ID: 01-47 Stormwater - North
Date/Time: 04/20/01 1015
Matrix: Storm Water

EPA Category: Conventional Parameters

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
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SCOEPA00023496

Analytical Data

Wacker Siltronic

Job Number: A10420AI

Lab Sample ID: A10420AI-1
Field ID: 01-47 Stormwater - North
Date/Time: 04/20/01 1015
Matrix: Storm Water

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units
Copper	EPA 200.7	0.03	0.05	mg/L
Lead	EPA 239.2	0.005	0.007	mg/L
Zinc	EPA 200.7	0.02	0.39	mg/L

Coffey Laboratories, Inc.
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Analytical Data

Wacker Siltronic

Job Number: A10420AI

Lab Sample ID: A10420AI-2
Field ID: 01-48 Stormwater - South
Date/Time: 04/20/01 1030
Matrix: Storm Water

EPA Category: Conventional Parameters

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
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SCOEPA00023498

Analytical Data

Wacker Siltronic

Job Number: A10420AI

Lab Sample ID: A10420AI-2
Field ID: 01-48 Stormwater - South
Date/Time: 04/20/01 1030
Matrix: Storm Water

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units
Copper	EPA 200.7	0.05	ND	mg/L
Lead	EPA 239.2	0.005	ND	mg/L
Zinc	EPA 200.7	0.02	0.29	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
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SCOEPA00023499

Analytical Data

Wacker Siltronic

Job Number: A10420AI

Lab Sample ID: A10420AI-3
Field ID: 01-49 Stormwater - East
Date/Time: 04/20/01 1045
Matrix: Storm Water

EPA Category: Conventional Parameters

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023500

Analytical Data

Wacker Siltronic

Job Number: A10420AI

Lab Sample ID: A10420AI-3
Field ID: 01-49 Stormwater - East
Date/Time: 04/20/01 1045
Matrix: Storm Water

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units
Copper	EPA 200.7	0.03	ND	mg/L
Lead	EPA 239.2	0.005	ND	mg/L
Zinc	EPA 200.7	0.02	0.26	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023501

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Thomas J. Rothschild
Company Name: Wacker Siltronic Corporation
Mailing Address: 7200 N.W. Front Avenue
Portland, Oregon 97210
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name:
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: JJR

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐ NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date / Time		Media	Analysis Requested	Test/ Profile
01-47 Storm Water - North				20 Apr 2001	1015	Water	oil and Grease (1), Copper, Lead, Zinc	
01-48 Storm Water - South				20 Apr 2001	1030	Water	↓ ↓ ↓ ↓	
01-49 Storm Water - East				20 Apr 2001	1045	Water		

Sampled By: AUTHORIZED CUSTOMER SIGNATURE DATE:

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
(1) Put in plastic bottle, Coffey will put in glass bottle at Lab. Per Linda/Sample Receiving.	Thomas J. Rothschild	20Apr 01	1420		4/20/01	1420
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023502

WACKER
Wacker Siltronic Corporation

June 28, 2001 ER:033/TM

Oregon Division of State Lands
Attn: Ms. Lori Warner
775 Summer Street NE, Suite 100
Salem, OR 97301-1279

RE: Wetlands Mitigation Monitoring Report
Permit no. SP-14646

Dear Ms. Warner:

Please find enclosed the information and report regarding mitigation activities related to State Permit No. SP-14646 issued December 18, 1997

Overview

State Permit No. SP-14646 was issued for the reconstruction and repair of 2,133 feet of riverbank property damaged by high water conditions in 1996 and 1997. This property is located at and owned by Wacker Siltronic Corporation, 7200 NW Front Avenue, Portland, Oregon.

Goals and Objectives

The goal of the bank repair project was to stabilize riverbank area with a geo-textile cloth to prevent soil and bank erosion and to place 12,800 tons of class 1000# and 500# rip-rap on the bank to hold the soil in place. Vegetation was replaced and additional vegetation added to further stabilize the riverbank and provide shade for the river.

Performance Standards

Permit conditions 7, 8, and 9 required:

- Placement of trees along the top of the riverbank at 20 feet apart. Trees shall include Oregon Ash, Upland Blade Hawthorne, and Willows.
- Debris removal.
- 3 year monitoring and maintenance to establish 80% survival of new vegetation.
- Photo monitoring

Three permits were issued for this project, each with differing planting requirements. In addition, Oregon DEQ issued a stormwater permit for the construction activities.

Agency	Spacing	Required Trees
• Department of the Army	40 ft.	53
• Division of State Lands	20 ft.	106
• Portland Bureau of Planning	50 ft.*	42

*Trees will be planted on 50 ft. center in the area of the rip-rap placement.

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023503

Methods

All work was performed from the top of the bank or from a floating barge. All existing debris was removed and clean rip-rap placed on the riverbank over a continuous layer of geo-textile cloth. (See attached Advanced American Diving scope of work.) Additional trees were placed at the top of the bank and within the rip-rap area to satisfy conditions in all permits. Seasonal labor was hired each summer to water and care for the new trees for each of three years until they became established.

Results

The bank repair and stabilization was successful with the placement of all planned rip-rap. Erosion control was added by the geo-textile cloth engineered design. Approximately 382 trees were planted along the top of the bank including 42 trees on 50 foot centers within the rip-rap area. Only 6 trees survived in the rip-rap area despite efforts to water them. Twenty-eight trees were destroyed by animals and 54 trees were replaced. Twenty of the trees destroyed by animals are coming back from the roots. 328 trees remain including those replanted. Final status of the trees are:

• Total Planted	382 (approximately)		
• Destroyed by animals	28		
• Dead (unknown reasons)	48		
• Surviving trees	274		
• Replaced	54		
• **Total New Trees**	**328**	**Required Trees**	**106**

The surviving trees are in addition to the more than 200 other trees and hundreds of shrubs and ground cover planted in landscape areas and along the riverbank. Current plans are to add 1,060 additional shrubs along the top of the riverbank at the request of the City of Portland.

Should you have questions about this report, vegetation, bank stabilization or future plantings please contact me at (503) 219-7532.

Sincerely,

Wacker Siltronic Corporation

Thomas C. McCue
Environmental Manager

Enclosures

CC: Oregon DEQ, Water Quality Division: 401 evaluation
Judy Linton, US Army Corps of Engineers

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023504

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7000 0520 0024 3444 4335

McCue

Postage	$ 1.60
Certified Fee	1.90
Return Receipt Fee (Endorsement Required)	1.50
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 4.00

FOREST PARK STA 97210 JUN 29 2001 USPS

Postmark Here

Recipient's Name *(Please Print Clearly) (To be completed by mailer)*
Lori Warner Division of State Lands, State of OR
Street, Apt. No.; or PO Box No.
775 Summer Street, NE Suite 100
City, State, ZIP+ 4
Salem, OR 97301-1279

PS Form 3800, February 2000 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Lori WArner
Division of State Lands
State of Oregon, Suite 100
775 Summer Street, NE
Salem, OR 97301-1279

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* S JACKSON
B. Date of Delivery 7/5/01
C. Signature
X S Jackson
☐ Agent
☐ Addressee
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7000 0520 0024 3444 4335

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

SCOEPA00023505

WACKER
Wacker Siltronic Corporation
Environmental Engineering

ER 034

July 5, 2001

Mark Ronayne
BES

RE: Additional information regarding Wacker Spent Acids to City through the current OWW waste system.

Dear Mark:

Wacker sent the City about 253 million gallons of Organic WasteWater (OWW) in 2000 or 695,000 gallons per day. The pH usually runs from 9 to 10.5 for the OWW system.

Both Wacker FAB's generate Spent Acid. At this time, only FAB 2 is capable of transferring its spent acid to the OWW system. The following calculated values reflect only FAB 2 additions to the OWW:

	Lbs /mo	Lbs/day	ppm in OWW	Gal/day
Hydrofluoric Acid	6150	205	35 as HF	n/a
Nitric Acid	53,700	1790	309 as HNO_3	n/a
Total Spent Acid	n/a	n/a	n/a	300

If you have any questions, please call me at 503-219-7313.

Regards,

WACKER SILTRONIC CORPORATION

J Claxton

James Claxton
Environmental Engineer

c: Tom McCue, Environmental Manager

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97283-3676
Phone (503) 219-7313
FAX (503) 219-7599

SCOEPA00023506

Wacker Siltronic Corporation

7200 NW Front Avenue
Portland, Oregon 97210-3676
Phone: (503) 219-7313

Fax: (503) 219-7599

FACSIMILE TRANSMITTAL SHEET

FAX No: 503-823-2409

DATE: July 5, 2001

FROM: Jim Claxton

TO: Mark Ronayne

ATTN: _____

NUMBER OF PAGES (including this page): 2

MESSAGE/SPECIAL INSTRUCTIONS:

Dear Mark:

Here is the information you requested.

Jim Claxton

WACKER
Wacker Siltronic Corporation

July 11, 2001 ER:035 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the June 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **JULY 15, 2001**

SAMPLING PERIOD: April - June, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	EPA 150.1	No Excursions SU	0.1	5.0 - 11.5	N/A	
TTOs (Volatiles)	EPA 8260	< 0.01 mg/L	0.005	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	< 0.052 mg/L	0.052	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.2	158 mg/L	0.01	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: Thomas C McCue Date: July 11, 2001

SCOEPA00023509

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **July 15, 2001**

SAMPLING PERIOD: June, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	FOXBORO	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C McCann Date: 7/11/01

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 NW Front Ave
Portland, OR
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 01-61-64
Project Name:
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [X] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: DR

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [X] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Collection Time	Media	Analysis Requested	Test/ Profile
01-61				6-7-01	0740	Liquid	BOD, CrT	
01-62				6-7-01	0740	Liquid	8260, 8270, 1-2 Diphenylhydrazine	
01-63				6-7-01	0740	Liquid	IPA, 8260	
01-64				6-7-01	0740	Liquid	Metals - As	

Sampled By: Dianne Thurston
AUTHORIZED CUSTOMER SIGNATURE Dianne Thurston DATE: 6-7-01

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
Please use detection limit of 0.001 ppm for CrT	Dianne Thurston	6-7-01	0840	[signature]	6-7-01	1000
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR

Analytical Data

Wacker Siltronic

Job Number: A10607CL

Lab Sample ID: A10607CL-3
Field ID: 01-63 OWW grab
Date/Time: 06/07/01 0740
Matrix: Water

EPA Category: Volatile Organics
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/13/01
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	8600. E
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	ND
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride ✓	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	ND
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene ✓	5.	ND	ND
1,3-Dichlorobenzene ✓	5.	ND	ND
1,4-Dichlorobenzene ✓	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane ✓	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.
E means Estimated Concentration

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A10607CL
Page Number: 11 of 14

Lab Sample ID: A10607CL-3
Field ID: 01-63 OWW grab
Date/Time: 06/07/01 0740
Matrix: Water

EPA Category: Volatile Organics
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/13/01
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene ✓	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
1,1-Dichloropropene	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	9.
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane ✓	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A10607CL

Lab Sample ID: A10607CL-3
Field ID: 01-63 oww-grab
Date/Time: 06/07/01 0740
Matrix: Water

EPA Category: Volatile Organics
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/13/01
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	5.	ND	ND
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
4-Bromofluorobenzene (Surr.)	---	---	99%
Dibromofluoromethane (Surr.)	---	---	95%
Toluene-d8 (Surr.)	---	---	99%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A10607CL
Page Number: 14 of 14

Lab Sample ID: A10607CL-4
Field ID: 01-64 OWW - composite
Date/Time: 06/07/01 0740
Matrix: Water

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units
Arsenic	EPA 200.8	0.052	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 6·7·01 Oven Temp: 105 C Analyst: DL

Date In: 6·7·01 Time In/Out: 1015 / 1410

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0913	0.0913	0
2. CE FAB-1	200			
3. CE FAB-1	200			
			Average CE FAB-1 TSS	
4. CE FAB-2	400	0.0925	0.0918	1.75
5. CE FAB-2	400	0.0940	0.0934	1.5
			Average CE FAB-2 TSS	1.625
6. OWW	50	0.1006	0.0921	170
7. OWW	50	0.0992	0.0919	146
			Average OWW TSS	158
8.				
9.				
			Average TSS	

Comments: _____

_____

_____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. NPDES Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

L:\FACLAB\WWTP\BENCH\TSSB.DOC

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(3-16) (17-19)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	6	1	TO	2001	6	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

ER:036JWC

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	914,000	1,001,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	32.3	40.9	lbs/day	--	4.3	5.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	13.0	17.6	lbs/day	--	1.7	2.4	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	58.0	62.2	lbs/day	--	7.7	8.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.6	1.3	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 7 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

SCOEPA00023517

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER (3-16)	DISCHARGE NUMBER (17-19)
101128	Outfall 001

MONITORING PERIOD

FROM YEAR (20-21)	MO (22-23)	DAY (24-25)	TO YEAR (26-27)	MO (28-29)	DAY (30-31)
2001	6	1	2001	6	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 7 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023518

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16): 101128 — PERMIT NUMBER
(17-19): Outfall 002 — DISCHARGE NUMBER

MONITORING PERIOD
FROM YEAR (20-21) 2001 MO (22-23) 6 DAY (24-25) 1
TO YEAR (26-27) 2001 MO (28-29) 6 DAY (30-31) 30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	95,000	182,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.3	1.0	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 01 MO 7 DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023519

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(5-16) (17-19)

101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	6	1	TO	2001	6	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,009,000	1,166,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	73.8	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:

Thomas C McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 7 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023520

WACKER
Wacker Siltronic Corporation

August 6, 2001 ER:039 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the July 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **August 15, 2001**

SAMPLING PERIOD: July, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C McCue Date: August 6, 2001

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16)

PERMIT NUMBER (3-10)	DISCHARGE NUMBER (11-19)
101128	Outfall 001

MONITORING PERIOD

FROM YEAR (20-21)	MO (22-23)	DAY (24-25)	TO YEAR (26-27)	MO (28-29)	DAY (30-31)
2001	7	1	2001	7	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(4 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	897,000	990,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	36.0	38.0	lbs/day	--	4.8	5.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	17.8	42.3	lbs/day	--	2.4	5.7	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	50.2	66.0	lbs/day	--	6.6	8.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.3	1.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 8 | DAY 1

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER : 040

SCOEPA00023523

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	7	1	TO	2001	7	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(46-53) MAXIMUM	(46-53) UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	(54-61) UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	< 0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

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Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 8 | DAY 1

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023524

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

FROM YEAR (20-21)	MO (22-23)	DAY (24-25)	TO YEAR (26-27)	MO (28-29)	DAY (30-31)
2001	7	1	2001	7	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (45-53) AVERAGE	MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	87,000	153,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 8 | DAY 1

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023525

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	7	1	TO	2001	7	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	984,000	1,087,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	73.6	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 8 | DAY 1

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023526

WACKER
Wacker Siltronic Corporation

September 7, 2001 ER:052 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the August 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023527

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **September 15, 2001**

SAMPLING PERIOD: August, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR WACKER SILTRONIC CORP:

Signature: Thomas C McCue Date: September 7, 2001

Thomas C. McCue, Environmental Manager

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	8	1	TO	2001	8	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (45-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
✓ Process Waste Water Flow	SAMPLE MEASUREMENT	913,000	996,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
✓ BOD	SAMPLE MEASUREMENT	33.1	38.3	lbs/day	--	4.4	5.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
✓ TSS	SAMPLE MEASUREMENT	9.0	13.4	lbs/day	--	1.2	1.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
✓ Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
✓ Cr^{Total}	SAMPLE MEASUREMENT	<0.01	0.02	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
✓ Fluoride	SAMPLE MEASUREMENT	57.1	60.0	lbs/day	--	7.6	8.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
✓ Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.3	1.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 9 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER 053

SCOEPA00023529

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16) (17-19)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	8	1	TO	2001	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	< 0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 9 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023530

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(3-16)	(17-19)
101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	8	1	TO	2001	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(I Card Only) (45-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
✓ MV-3 Flow	SAMPLE MEASUREMENT	109,000	205,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
✓ MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas C McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 9 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023531

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-10) 101128 PERMIT NUMBER	(11-19) Outfall 003 DISCHARGE NUMBER

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	8	1	TO	2001	8	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,022,000	1,163,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	73.5	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.0	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1001 AND 33 USC 1319 (Penalties under these statutes are certain fines up to $10,000 and certain imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 9 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023532

WACKER
Wacker Siltronic Corporation

September 7, 2001

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER054:JC

Dear Dr. Zais,

Below are the results of the annual bioassay test performed August 14 through August 21, 2001 as required in our NPDES permit number 101128. The results of the bioassay are in compliance with the conditions of our permit. The bioassay was conducted by Coffey Laboratories, Inc.

Acute (48-hour) Results:	Survival (% Effluent)	
	Ceriodaphnia dubia	Pimephales promelas
LC_{50}	15%	>20%
ZID Pass Criteria[1]	≥13.4%	≥13.4%
Chronic Results:	**Survival (% Effluent)**	
	Ceriodaphnia dubia	Pimephales promelas
LC_{50}	14.2%	>20%
Mixing Zone Pass Criteria[1]	≥ 1.8%	≥ 1.8%

If you have any questions please contact me at 503-219-7532.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
NPDES DMR File

[1] CH2MHILL. Mixing Zone Effluent Dilution Evaluations prepared for Wacker Siltronic Corporation in 1994, 1995 and 1996. The NPDES discharge permit defines, for Wacker's effluent discharge to the Willamette River, a zone of initial dilution (ZID) having a 5-foot radius from the point of discharge at Outfall 003, and a mixing zone having a 50-foot radius from the point of discharge at Outfall 003. The mixing zone dilution studies identified worst-case (0.1 feet/ second as current velocity) dilutions at distances of 5 and 50 feet from the discharge point of 7.5:1 and 55.5:1 ($Q_{Total}/Q_{Effluent}$) respectively. These dilutions are equivalent to 13.4% effluent at the edge of the ZID and 1.8% effluent at the edge of the mixing zone. According to the discharge permit, the effluent is considered to be acutely toxic if an acute test LC_{50} is less than 13.4% effluent, and is considered to be chronically toxic if a chronic test LC_{50} is less than 1.8% effluent. Conversely, the effluent is considered to be in compliance for toxicity if the acute test $LC_{50} \geq$ 13.4% effluent and the chronic test $LC_{50} \geq$ 1.8% effluent.

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023533

WACKER
Wacker Siltronic Corporation

September 19, 2001 ER:055 JWC

Judy Johndohl
Oregon DEQ
Executive Building
811 SW Sixth Avenue
Portland, OR 97204

Dear Ms. Johndohl

Enclosed is copy of our DMRQACHEM report for 6/18/01 to 9/14/01.

If you have any questions, please contact Tom Rothschild @ 503-219-7374

Regards,

WACKER SILTRONIC CORPORATION

Jim Claxton
Environmental Engineer

enclosure:
(1) DMRQACHEM report for 6/18/01 to 9/14/01

cc: Tom Rothschild

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

STAPLE HE

NPDES PERMITTEE DATA REPORT FORM

Form Approved. OMB No. 2080-0021 Approval Expires 9/30/2001

United States Environmental Protection Agency
Laboratory DMR-QA Evaluation Study 21
Laboratory Performance Evaluation
(These data are collected under the authority of the Federal Water Pollution Control Act.)

EPA USE ONLY	
N	1
1	2

NPDES Permit Number										
			1	0	1	1	2	8		
3	4	5	6	7	8	9	10	11	12	13

Permit Extension

7200 N W Front Avenue — Current Permittee Mailing Address: Portland, Oregon 97210

NPDES Permit Number: 101128

Phone 503-243-2020

ATTENTION: Follow the checklist on next page for instructions on completing this form and submitting data for evaluation.

Enter Permittee Name as it Should Appear in Report Heading:

W	A	C	K	E	R		S	I	L	T	R	O	N	I	C		C	O	R	P	O	R	A	T	I	O	N									
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49

For DMR-QA Study 20, conducted in 2000, the permittee

Received Samples:	YES	NO
	X	
	50	51

Submitted Data:	YES	NO
	X	
	52	53

Received a Report in Response:	YES	NO
	X	
	54	55

Certification by Permit Holder or Authorized Representative

(as per 40 CFR Part 122.22 - see instructions)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Each reported value was produced from a single analytical run using the analytical system that routinely performs these analyses to produce compliance monitoring data required under our National Pollutant Discharge Elimination System (NPDES) permit. Neither I nor any of my subordinates compared our results with results from independent analyses conducted by us or any other laboratory before we reported our results to the USEPA. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title of Certifying Official (Type or Print)	Signature	Date Signed
Thomas J. Rothschild Facilities Chemist	Thomas J. Rothschild	12 Sep 2001

Address of Certifying Official (if different from Permittee address above.)	Telephone Number
Same	503-243-2020

SCOEPA00023535

United States Environmental Protection Agency
DMR-QA Study 21
Laboratory Performance Evaluation
(These data are collected under the authority of Federal Water Pollution Control Act.)

1	0	1	1	2	8			

Identification of All CHEM & TOX Laboratories who did Analysis for this Permit
Permit Number:

N	2
1	2

Name	Address	Labcode assigned by EPA	Lab Analysis (Enter an X in all that apply)		Lab Type - choose one (F=Federal, C=Contract, I=Industrial, S=State, O=Other)
			Chem	Tox	
Wacker Siltronic Corporation Facilities Operations Laboratory	7200 N.W. Front Avenue Portland, Oregon 97210	O R O 1 0 0 6 (3 4 5 6 7 8 9)	X (10)	(11)	I (12)
Coffey Laboratories Incorporated	12423 N.E. Whitaker Way Portland, Oregon 97230	O R O 0 0 1 1 (13 14 15 16 17 18 19)	X (20)	(21)	C (22)
		(23 24 25 26 27 28 29)	(30)	(31)	(32)
		(33 34 35 36 37 38 39)	(40)	(41)	(42)

Continued on the next page

SCOEPA00023536

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

STUDY #: *DMRQA21*

STUDY TYPE: *DMRQACHEM*

Duration: 06/18/01 - 09/14/01

MAIL OR FAX COMPLETED REPORT TO:

SPEX Certiprep, Inc.
PT Coordinator
CRM Division
203 Norcross Ave.
Metuchen, NJ 08840
FAX: 732-494-1747

PERMITTEES: SPEX CERTIPREP MUST RECEIVE YOUR COMPLETED REPORTS BY MIDNIGHT EST ON *09/14/01*

COMMERCIAL LABORATORIES: YOUR PERMITTEES MUST RECEIVE YOUR COMPLETED FORMS BY *8/29/01*

REPORT APPROVED BY:
(Laboratory Official)

OR01006 (Required - Enter corrections below)

EPA LAB ID: O R 0 1 0 0 6

Name: Thomas J. Rothschild
Title: Facilities Chemist
Address: Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, Oregon 97210
Phone #: 503-243-2020
Fax #: 503-417-4144

Signature: Thomas J. Rothschild
Date: 10 Sep 2001

REPORT APPROVED BY:
(Permittee Official)
(Unless otherwise specified, the Performance Report will be sent to the person indicated below)

OR0030589 (Required - Enter corrections below)

PERMITTEE #: O R 0 0 3 0 5 8 9

Extension (if applicable)

Name: Thomas J. Rothschild
Title: Facilities Chemist
Address: Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, Oregon 97210
Phone #: 503-243-2020
Fax #: 503-417-4144

Signature: Thomas J. Rothschild
Date: 10 Sep 2001

PLEASE FILL IN THE FOLLOWING INFORMATION REGARDING THE AGENCY TO WHICH YOUR REPORT SHOULD BE SENT:

Contact Name: Judy Johndohl
Agency: Oregon DEQ
Address: Executive Building
811 SW Sixth Avenue
Portland, Oregon 97204
Phone #: 503-229-6896
Fax #:

PLEASE TREAT EACH PT STUDY SAMPLE THE SAME WAY YOU WOULD TREAT A ROUTINE SAMPLE.

DO NOT REVEAL RESULTS OR ANY OTHER ASPECT OF THIS TEST TO ANY PERSON OR OTHER LABORATORY UNTIL THE TEST ROUND IS CONCLUDED.

SPEX CertiPrep and Protocol Analytical Supplies confirm that this PT Program complies with NIST Handbook 150: NVLAP Procedures and General Requirements and with NIST Handbook 150-19: Chemical Calibration – Providers of Proficiency Testing.
PT materials and PT studies have been developed using the criteria in National Standards for Water Proficiency Testing Studies Criteria Document, USEPA dated December 1998.

No claims against SPEX CERTIPREP, Inc. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this product shall be greater in amount than the purchase price of the product in respect of which damages are claimed, and in no event shall SPEX CERTIPREP, Inc. be liable for any loss of profits or any incidental, special or consequential damages.

SO#: 73201 *CID:* 110180*1

NVLAP® Lab Code: 200392-0
SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM
ISO 9001 CERTIFIED

SCOEPA00023537

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMROA21*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/18/01 ***Closing Date:*** 09/14/01

MINERALS

Wacker Siltronic Corp.

Catalog Number: PTSPEX-MIN-WP

7200 NW Front Ave.

OR01006 (Required - Enter corrections below)

EPA Lab Id #: 0 R 0 1 0 0 6

Sales Order: 73201

Portland *OR* *97210*

Customer #: 110180*1

OR0030589 (Required - Enter corrections below)

Permittee #: 0 R 0 0 3 0 5 8 9

Extension (if applicable)

Lot #: 12-41M12-42M

Analyte	*Analyte Code*	*VAF'*	*Method Code*	*Method Description*	*</>*	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
ALKALINITY(TOTAL)	*0027*	X					*MILLIGRAMS/L*	/ /
CALCIUM	*0023*	X					*MILLIGRAMS/L*	/ /
Cl	*0028*	X					*MILLIGRAMS/L*	/ /
F	*0029*	X		SM4500-F C 20ED		0.581	*MILLIGRAMS/L*	09/04/01
HARDNESS(CaCo3)	*0022*	X					*MILLIGRAMS/L*	/ /
K	*0026*	X					*MILLIGRAMS/L*	/ /
MAGNESIUM	*0024*	X					*MILLIGRAMS/L*	/ /
Na	*0025*	X					*MILLIGRAMS/L*	/ /
SP. COND.*	*0020*	X					*UMHOS/CM@25C*	/ /
SULFATE	*0030*	X					*MILLIGRAMS/L*	/ /
TDS*	*0021*	X					*MILLIGRAMS/L*	/ /

Please report the result on the diluted sample to three significant figures in mg/L; for conductivity report in umhos/cm@ 25C.

' : Voluntary Analyte Flag -- Analytes marked with an "X" are voluntary for the DMRQA Study.

Authorized Signature: Thomas J. Rothschild ***Date:*** 7 Sep 200

IMPORTANT: Permittees: SPEX CertiPrep must receive your completed form no later than 09/14/01

IMPORTANT: Commercial Laboratories: Your Permittee must receive your completed forms no later than 8/29/01

Lab Code: 200392-0 SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

SCOEPA00023538

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMROA21*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/18/01 ***Closing Date:*** 09/14/01

NUTRIENTS

Wacker Siltronic Corp.

Catalog Number: PTSPEX-NUT-WP

7200 NW Front Ave.

OR01006 (Required - Enter corrections below)

EPA Lab Id #: O R 0 1 0 0 6

Sales Order: 73201

Portland *OR* *97210*

Customer #: 110180*1

OR0030589 (Required - Enter corrections below)

Permittee #: O R 0 0 3 0 5 8 9

Lot #: 12-59N12-60N

Extension (if applicable)

Analyte	*Analyte Code*	*VAF'*	*Method Code*	*Method Description*	</>	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
HPO4-P	0033			~~SM4500-PB+E20Ed~~		~~9.04~~	MILLIGRAMS/L	~~08/29/01~~
NH3-N	0031					.	MILLIGRAMS/L	/ /
NO3-N	0032					.	MILLIGRAMS/L	/ /
TOTAL KJEHALDEL- N	0034					.	MILLIGRAMS/L	/ /
TOTAL P	0035			SM4500-PB+E20ED		9.04	MILLIGRAMS/L	08/29/01

Please report the result on the diluted sample to three significant figures in mg/L.

' : Voluntary Analyte Flag -- Analytes marked with an "X" are voluntary for the DMRQA Study.

Authorized Signature: Thomas J. Rothschild ***Date:*** 7Sep2001

IMPORTANT: Permittees: SPEX CertiPrep must receive your completed form no later than 09/14/01

IMPORTANT: Commercial Laboratories: Your Permittee must receive your completed forms no later than 8/29/01

Lab Code: 200392-0 SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

SCOEPA00023539

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMROA21*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/18/01 ***Closing Date:*** 09/14/01

pH

Catalog Number: PTSPEX-PH-WP

Wacker Siltronic Corp.

7200 NW Front Ave.

Portland *OR* *97210*

Sales Order: 73201

Customer #: 110180*1

OR01006 (Required - Enter corrections below)

EPA Lab Id #: OR01006

OR0030589 (Required - Enter corrections below)

Permittee #: OR0030589

Extension (if applicable)

Lot #: 12-46PH-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code*	*Method Description*	*</>*	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
pH	0019			SM4500H+B 20Ed		4.29	UNITS	09/10/01

Please report the result to three significant figures in units.

' : Voluntary Analyte Flag -- Analytes marked with an "X" are voluntary for the DMRQA Study.

Authorized Signature: Thomas J. Rothschild ***Date:*** 10 Sep 2001

IMPORTANT: Permittees: SPEX CertiPrep must receive your completed form no later than 09/14/01

IMPORTANT: Commercial Laboratories: Your Permittee must receive your completed forms no later than 8/29/01

NVLAP® Lab Code: 200392-0

SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

ISO 9001 CERTIFIED

SCOEPA00023540

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMROA21*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/18/01 ***Closing Date:*** 09/14/01

RESIDUES

Catalog Number: PTSPEX-RES-WP

Wacker Siltronic Corp.

7200 NW Front Ave.

Portland *OR* *97210*

Sales Order: 73201

Customer #: 110180*1

OR01006 (Required - Enter corrections below)

EPA Lab Id #: OR01006

OR0030589 (Required - Enter corrections below)

Permittee #: OR0030589

Extension (if applicable)

Lot #: 12-63RES-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code*	*Method Description*	*</>*	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
NFR	0072			SM2540D 20ED		85.2	MILLIGRAMS/L	09/04/01

Please report the result on the diluted sample to three significant figures in mg/L, based on 0.5 grams of sample weight.

' : Voluntary Analyte Flag -- Analytes marked with an "X" are voluntary for the DMRQA Study.

Authorized Signature: Thomas J. Rothschild ***Date:*** 7 Sep 2001

IMPORTANT: Permittees: SPEX CertiPrep must receive your completed form no later than 09/14/01

IMPORTANT: Commercial Laboratories: Your Permittee must receive your completed forms no later than 8/29/01

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

STUDY #: *DMRQA21*

STUDY TYPE: *DMRQACHEM*

Duration: 06/18/01 - 09/14/01

MAIL OR FAX COMPLETED REPORT TO:

SPEX Certiprep, Inc.
PT Coordinator
CRM Division
203 Norcross Ave.
Metuchen, NJ 08840
FAX: 732-494-1747

PERMITTEES: SPEX CERTIPREP MUST RECEIVE YOUR COMPLETED REPORTS BY MIDNIGHT EST ON *09/14/01*

COMMERCIAL LABORATORIES: YOUR PERMITTEES MUST RECEIVE YOUR COMPLETED FORMS BY *8/29/01*

REPORT APPROVED BY:
(Laboratory Official)

OR01006 (Required - Enter corrections below)
EPA LAB ID: O R O O O 1 1

Name: _____
Title: _____
Address: Coffey Laboratories, Inc.
12423 NE Whitaker Way
Portland, Oregon 97230
Phone #: 503-254-1794
Fax #: 503-254-1452

Signature: Thomas J. Rothschild
Date: 10 Sep 2001

REPORT APPROVED BY:
(Permittee Official)
(Unless otherwise specified, the Performance Report will be sent to the person indicated below)

OR0030589 (Required - Enter corrections below)
PERMITTEE #: O R O 0 3 0 5 8 9
Extension (if applicable) _ _

Name: Thomas J. Rothschild
Title: Facilities Chemist
Address: Wacker Siltronic Corporation
7200 N.W. Front Avenue
Portland, Oregon 97210
Phone #: 503-243-2020
Fax #: 503-417-4144

Signature: Thomas J. Rothschild
Date: 10 Sep 2001

PLEASE FILL IN THE FOLLOWING INFORMATION REGARDING THE AGENCY TO WHICH YOUR REPORT SHOULD BE SENT:

Contact Name: Judy Johndohl
Agency: Oregon DEQ
Address: Executive Building
811 SW Sixth Avenue
Portland, Oregon 97204
Phone #: 503-229-6896
Fax #: _____

PLEASE TREAT EACH PT STUDY SAMPLE THE SAME WAY YOU WOULD TREAT A ROUTINE SAMPLE.

DO NOT REVEAL RESULTS OR ANY OTHER ASPECT OF THIS TEST TO ANY PERSON OR OTHER LABORATORY UNTIL THE TEST ROUND IS CONCLUDED.

SPEX CertiPrep and Protocol Analytical Supplies confirm that this PT Program complies with NIST Handbook 150: NVLAP Procedures and General Requirements and with NIST Handbook 150-19: Chemical Calibration – Providers of Proficiency Testing.
PT materials and PT studies have been developed using the criteria in National Standards for Water Proficiency Testing Studies Criteria Document, USEPA dated December 1998.

No claims against SPEX CERTIPREP, Inc. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this product shall be greater in amount than the purchase price of the product in respect of which damages are claimed, and in no event shall SPEX CERTIPREP, Inc. be liable for any loss of profits or any incidental, special or consequential damages.

SO#: 73201 *CID:* 110180*1

Lab Code: 200392-0 SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

SCOEPA00023542

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMRQA21*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/18/01 ***Closing Date:*** 09/14/01

DEMAND

Wacker Siltronic Corp.

7200 NW Front Ave.

Portland *OR* *97210*

Catalog Number: PTSPEX-DEM-WP

Sales Order: 73201

Customer #: 110180*1

OR0001 1
OR01006 (Required - Enter corrections below)

EPA Lab Id #: ~~O R O 1 0 0 6~~

OR0030589 (Required - Enter corrections below)

Permittee #: O R O 0 3 0 5 8 9

Extension (if applicable)

Lot #: 12-60DEM-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code*	*Method Description*	*</>*	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
BOD	*0038*			EPA 405.1		14.3	*MILLIGRAMS/L*	08/23/01
CBOD	*0102*					.	*MILLIGRAMS/L*	/ /
COD	*0036*					.	*MILLIGRAMS/L*	/ /
TOC	*0037*					.	*MILLIGRAMS/L*	/ /

Please report the result on the diluted sample to three significant figures in mg/L.

' : Voluntary Analyte Flag -- Analytes marked with an "X" are voluntary for the DMRQA Study.

Authorized Signature: Thomas J. Rothschild ***Date:*** 10 Sep 2001

IMPORTANT: Permittees: SPEX CertiPrep must receive your completed form no later than 09/14/01

IMPORTANT: Commercial Laboratories: Your Permittee must receive your completed forms no later than 8/29/01

NVLAP® Lab Code: 200392-0

SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

ISO 9001 CERTIFIED

SCOEPA00023543

Discharge Monitoring Report - Quality Assurance Proficiency Testing Study

Data Reporting Sheet

STUDY #: *DMROA21*

STUDY TYPE: *DMRQACHEM*

Starting Date: 06/18/01 ***Closing Date:*** 09/14/01

TRACE METALS FOR DMRQA

Catalog Number: *PTSPEX-TM-DMRQA*

OR 0 0 0 1 1

OR01006 (Required - Enter corrections below)

EPA Lab Id #: ~~O~~ ~~R~~ 0 ~~1~~ 0 ~~0~~ ~~6~~

OR0030589 (Required - Enter corrections below)

Permittee #: O R 0 3 0 5 8 9

Extension (if applicable)

Wacker Siltronic Corp.

7200 NW Front Ave.

Portland *OR* *97210*

Sales Order: 73201

Customer #: 110180*1

Lot #: 12-51TM-PT

Analyte	*Analyte Code*	*VAF'*	*Method Code*	*Method Description*	*</>*	*Concentration*	*Units*	*Date of Analysis (mm/dd/yy)*
ALUMINUM	*0001*			~~EPA 218.2~~			~~MICROGRAMS/L~~	/ /
ARSENIC	*0002*						*MICROGRAMS/L*	/ /
CADMIUM	*0004*						*MICROGRAMS/L*	/ /
CHROMIUM	*0006*			EPA 218.2		369.0	*MICROGRAMS/L*	08/14/01
COBALT	*0005*						*MICROGRAMS/L*	/ /
COPPER	*0007*						*MICROGRAMS/L*	/ /
IRON	*0008*						*MICROGRAMS/L*	/ /
LEAD	*0012*						*MICROGRAMS/L*	/ /
MANGANESE	*0010*						*MICROGRAMS/L*	/ /
MERCURY	*0009*						*MICROGRAMS/L*	/ /
NICKEL	*0011*						*MICROGRAMS/L*	/ /
SELENIUM	*0013*						*MICROGRAMS/L*	/ /
VANADIUM	*0014*						*MICROGRAMS/L*	/ /
ZINC	*0015*						*MICROGRAMS/L*	/ /

Please report the results on the diluted sample to three significant figures in ug/L.

' : Voluntary Analyte Flag -- Analytes marked with an "X" are voluntary for the DMRQA Study.

Authorized Signature: Thomas J. Rothschild ***Date:*** 10 Sep 2001

IMPORTANT: Permittees: SPEX CertiPrep must receive your completed form no later than 09/14/01

IMPORTANT: Commercial Laboratories: Your Permittee must receive your completed forms no later than 8/29/01

Lab Code: 200392-0 SPEX CERTIPREP, INC. 203 NORCROSS AVENUE METUCHEN, NJ 08840 732-549-7144 1-800-LAB-SPEX FAX:732-494-1747 www.SPEXCSP.COM

SCOEPA00023544

WACKER
Wacker Siltronic Corpor

September 27, 2001

ER056

John Barbay
TPS Technologies, Inc.
9333 North Haborgate Street
Portland, OR 97203

Subject: Manifest Re-certification for North Sump Sludge and the Silicon Solids Sludge

Dear John,

Here are the analytical results you requested for the North Sump Sludge and the Silicon Solids Sludge that Wacker is currently sending to TPS. The analytical results are summarized in the following table and copies of the analytical laboratory reports are enclosed.

Parameter	North Sump Sludge	Silicon Solids Sludge	Method	Detection Limit
Extractable Organic Halogens	34 ppm	10 ppm	EOX 9020	2ppm
Arsenic	ND	ND	TCLP 1311/Metal 6020	0.11ppm
Barium	ND	0.11 ppm		
Cadmium	ND	ND		
Chromium	ND	ND		
Lead	ND	ND		
Selenium	ND	ND		
Silver	ND	ND		
Mercury	ND	ND	TCLP 13211/7470	0.044ppm
Diesel	ND <44ppm	ND <38ppm	NW TPH-HCID; TPH-HCID qualitative for hydrocarbons	Detection limits change with sample matrix
Gasoline	ND <18ppm	ND <15ppm		
Hydrocarbon >C24	ND <88ppm	ND <76ppm		
Diesel	ND <50ppm	ND <50ppm	NW TPH-Dx; TPH-Dx quantitative semi-volatile petroleum products	
Hydrocarbon >C24	ND <100ppm	ND <100ppm		

ND: none detected

NW TPH-HCID; TPH-HCID is a qualitative screening test for hydrocarbons. NW TPH-Dx is a quantitative analysis for semi-volatile petroleum products. If the qualitative screening test for hydrocarbons gives a non-detect result, then the quantitative analysis for semi-volatile petroleum products is usually not performed.

If you have any questions, please contact me at 503-219-7313

J Claxton

Jim Claxton
Environmental Engineer

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

WACKER
Wacker Siltronic Corpor

September 27, 2001

ER057

John Barbay
TPS Technologies, Inc.
9333 North Haborgate Street
Portland, OR 97203

Subject: Manifest Re-certification for Storm Drain Sludge and the Wastewater Treatment plant Filter Cake Sludge

Dear John,

Here are the analytical results you requested for the Storm Drain Sludge and the Wastewater Treatment plant Filter Cake Sludge that Wacker is currently sending to TPS. The analytical results are summarized in the following table and copies of the analytical laboratory reports are enclosed.

Parameter	WWTP Filter Cake Sludge	Storm Drain Sludge	Method	Detection Limit
Extractable Organic Halogens	ND	23 ppm	EOX 9020	2 ppm
Arsenic	ND	ND	TCLP 1311/Metal 6020	0.11 ppm
Barium	0.2 ppm	0.2 ppm		
Cadmium	ND	ND		
Chromium	ND	ND		
Lead	ND	ND		
Selenium	ND	ND		
Silver	ND	ND		
Mercury	ND	ND	TCLP 13211/7470	0.044 ppm
Diesel	ND <5 ppm	ND <100 ppm	NW TPH-HCID; TPH-HCID qualitative for hydrocarbons	Detection limits change with sample matrix
Gasoline	ND <2 ppm	ND <40 ppm		
Hydrocarbon >C24	ND <10 ppm	ND <200 ppm		
Diesel	ND <5 ppm		NW TPH-Dx; TPH-Dx quantitative semi-volatile petroleum products	
Hydrocarbon >C24	ND <10 ppm			

ND: none detected
NW TPH-HCID; TPH-HCID is a qualitative screening test for hydrocarbons. NW TPH-Dx is a quantitative analysis for semi-volatile petroleum products. If the qualitative screening test for hydrocarbons gives a non-detect result, then the quantitative analysis for semi-volatile petroleum products is usually not performed.

If you have any questions, please contact me at 503-219-7313

J Claxton

Jim Claxton
Environmental Engineer

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

WACKER
Wacker Siltronic Corporation

October 11, 2001 ER:061 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the September 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **OCTOBER 15, 2001**

SAMPLING PERIOD: July - September, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
September 2001	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION		MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	No excursions		SU	NA	5.0 - 11.5	N/A	
TTOs (Volatiles)	<0.01		mg/L	0.005	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION		MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	<0.005		mg/L	0.005	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	230		mg/L	1.0	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

BY WACKER SILTRONIC CORP:

Signature: Thomas G McCue Date: October 11, 2001

SCOEPA00023548

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: October 15, 2001

SAMPLING PERIOD: September, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

BY WACKER SILTRONIC CORP:

Signature: Thomas G McCune Date: October 11, 2001

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9-6-01 Oven Temp: 105 C Analyst: DI

Date In: 9-6-01 Time In/Out: 1030 / 1330

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0921	0.0921	0
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
2 ~~4~~. CE FAB-2	400	0.0928	0.0923	1.25
3 ~~5~~. CE FAB-2	400	0.0923	0.0918	1.25
		Average CE FAB-2 TSS		1.25
18 ~~6~~. OWW	50	0.1031	0.0922	218
19 ~~7~~. OWW	50	0.1056	0.0940	232
		Average OWW TSS		225
8.				
9.				
		Average TSS		

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. NPDES Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023550

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 13 Sep 2001 Oven Temp: 103 C Analyst: JJR

Date In: 13 Sep 2001 Time In/Out: 0839 / 1103

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0928	0.0929	-
2. CE FAB-1	200	-	-	-
3. CE FAB-1	200	-	-	-
		Average CE FAB-1 TSS		
4. CE FAB-2	200	0.0928	0.0927	0.5
5. CE FAB-2	200	0.0929	0.0928	0.5
		Average CE FAB-2 TSS		0.5
6. OWW	50	0.0974	0.0924	100.0
7. OWW	50	0.0980	0.0929	102.0
		Average OWW TSS		101.0
8.				
9.				
		Average TSS		

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. NPDES Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9.27.01 Oven Temp: 103 C Analyst: DL

Date In: 9.27.01 Time In/Out: 1030 / 1405

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0922	0.0922	0
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
2A. CE FAB-2	~~200~~ 400	0.0915	0.0910	1.25
3B. CE FAB-2	400	0.0919	0.0912	1.75
		Average CE FAB-2 TSS		1.5
4C. OWW	50	0.1094	0.0907	374
5D. OWW	50	0.1083	0.0905	356
		Average OWW TSS		365
8.				
9.				
		Average TSS		

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. NPDES Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, OR
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 01-96 ≠ 99
Project Name:
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: DL

FOR LABORATORY USE ONLY Page ____ of ____
Job Number: _____
Custabbr: _____ ☐NEW
☐ VISA ☐ M/C Cardholder: _____
Card #: _____ Exp: __/__/__
Cash / Check / CC: $_____ #: _____
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Time	Media	Analysis Requested	Test/ Profile
01-96				9-6-01	0730		Cr(T), BOD	
01-97				9-6-01	0730		8260, 8270, 1-2 Diphenylhydrazine	
01-98				9-6-01	0730		Total As	
01-99				9-6-01	0730		8260, IPA	
01-100				9-5-01	2360		NW-TPH-HCID, NW-TPH-DX	
01-101				9-5-01	2300		NW-TPH-HCID, NW-TPH-DX	

Sampled By: Dianne Irish
AUTHORIZED CUSTOMER SIGNATURE: Dianne Irish DATE: 9-6-01

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
Cr(T): detection limit 0.001ppm IPA: detect limit 1.0ppm	Dianne Irish	9-6-01	0840	DL	9-6-01	1045
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR

Analytical Data

Wacker Siltronic

Job Number: A10906BY

Lab Sample ID: A10906BY-3
Field ID: 01-98
Date/Time: 09/06/01 0730
Matrix: Water

EPA Category: Metals

Parameter	Method	Detection Limit	Analytical Result	Units
Arsenic	EPA 200.8	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A10906BY

Lab Sample ID: A10906BY-4
Field ID: 01-99
Date/Time: 09/06/01 0730
Matrix: Water

EPA Category: Volatile Organics
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 09/18/01
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	3600. E
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	ND
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	ND
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.
E means Estimated Concentration

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A10906BY

Lab Sample ID: A10906BY-4
Field ID: 01-99
Date/Time: 09/06/01 0730
Matrix: Water

EPA Category: Volatile Organics
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 09/18/01
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
[illegible]-Dichloropropene	5.	ND	ND
[illegible]-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	ND
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
[illegible] means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023556

Analytical Data

Wacker Siltronic

Job Number: A10906BY

Lab Sample ID: A10906BY-4
Field ID: 01-99
Date/Time: 09/06/01 0730
Matrix: Water

EPA Category: Volatile Organics
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 09/18/01
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	5.	ND	ND
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
Bromofluorobenzene (Surr.)	---	---	103%
Dibromofluoromethane (Surr.)	---	---	107%
Toluene-d8 (Surr.)	---	---	102%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023557

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	9	1	TO	2001	9	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	825,000	1,160,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	35.3	59.8	lbs/day	--	5.0	9.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	10.0	15.8	lbs/day	--	1.4	2.4	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	46.3	65.9	lbs/day	--	6.7	8.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1 ✓	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 10 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER 062

SCOEPA00023558

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	9	1	TO	2001	9	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(46-53) MAXIMUM	(54-61) UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	< 0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 01 MO 10 DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023559

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-16) PERMIT NUMBER	(17-18) DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	9	1	TO	2001	9	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	123,000	239,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 10 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023560

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128
(17-19) DISCHARGE NUMBER: Outfall 003

MONITORING PERIOD
FROM YEAR 2001 MO 9 DAY 1 (20-21) (22-23) (24-25)
TO YEAR 2001 MO 9 DAY 30 (26-27) (28-29) (30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	948,000	1,323,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	72.9	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 01 MO 10 DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023561

WACKER
Wacker Siltronic Corporation

November 7, 2001 ER:066 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the October 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

SCOEPA00023562

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **November 15, 2001**

SAMPLING PERIOD: October, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C. McCann Date: Nov 7, 2001

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(3-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	10	1	TO	2001	10	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	930,000	1,100,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	25.1	35.9	lbs/day	--	3.3	5.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	13.0	18.0	lbs/day	--	1.7	2.3	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	69.9	81.2	lbs/day	--	9.2	11.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes are certain fines up to $10,000 and certain imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 11 | DAY 5

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

ER067 - Swc

SCOEPA00023564

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	10	1	TO	2001	10	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(3 Card Only) QUANTITY OR LOADING (54-61) MAXIMUM	(3 Card Only) QUANTITY OR LOADING UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(4 Card Only) QUALITY OR CONCENTRATION (46-53) AVERAGE	(4 Card Only) QUALITY OR CONCENTRATION (54-61) MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes are currently listed up to $10,000 and up to additional imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020
DATE: YEAR 01 | MO 11 | DAY 5

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

ER067: SWC

SCOEPA00023565

PERMITTEE NAME/ADDRESS (Include Facility Name/Location) (Forest)

NAME Wacker Siltronic Corporation

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

FROM YEAR	MO	DAY	TO YEAR	MO	DAY
2001	10	1	2001	10	31
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	136,000	216,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.3	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Thomas G. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	NUMBER	DATE YEAR	MO	DAY
503	243-2020	01	11	5

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

ER067

SCOEPA00023566

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Wacker Siltronic Corporation
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY: 7200 NW Front Ave.
LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	10	1	TO	2001	10	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,066,000	1,194,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	72.4	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas G. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 11 | DAY 5

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

ER067

SCOEPA00023567

Wacker Siltronic Corporation

7200 NW Front Avenue
Portland, Oregon 97210-3676
Phone: (503) 219-7313

Fax: (503) 219-7599

FACSIMILE TRANSMITTAL SHEET

FAX No: 503-229-6957

DATE: November 13, 2001

TO: Elliot Zais

FROM: Jim Claxton

NUMBER OF PAGES (including this page): 5

MESSAGE/SPECIAL INSTRUCTIONS:

Dear Elliot:

Enclosed is a revised copy of Wacker's monthly NPDES report for October 2001. Please replace the copy that you have (dated 11/5/01 ER067 JWC) with this revised copy (dated 11/13/01 ER069 JWC).

An error was made in the BOD calculation resulting in a low reported BOD value.

I will send you the revised original in the mail.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(7-16)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

(17-18)

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	10	1	TO	2001	10	31
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	930,000	1,100,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	32.2	36.9	lbs/day	--	4.3	5.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	13.0	18.0	lbs/day	--	1.7	2.3	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	69.9	81.2	lbs/day	--	9.2	11.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 11 | DAY 13

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER069 JWC

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-4 WHICH MAY NOT BE USED.)

SCOEPA00023569

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2001	10	1	TO	2001	10	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(46-53) MAXIMUM	(54-61) UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes are certain fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 11 | DAY 13

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023570

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16)

101128 — PERMIT NUMBER
Outfall 002 — DISCHARGE NUMBER
(17-19)

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	10	1	TO	2001	10	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(3 Card Only) QUANTITY OR LOADING (54-61) MAXIMUM	(3 Card Only) QUANTITY OR LOADING UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(4 Card Only) QUALITY OR CONCENTRATION (46-53) AVERAGE	(4 Card Only) QUALITY OR CONCENTRATION (54-61) MAXIMUM	(4 Card Only) QUALITY OR CONCENTRATION UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	136,000	216,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.3	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 11 | DAY 13

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023571

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(7-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	10	1	TO	2001	10	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (45-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,066,000	1,194,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	72.4	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes are up to $10,000 and a maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 11 | DAY 13

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023572

WACKER
Wacker Siltronic Corporation

November 30, 2001 ER: 071JWC

Judy Johndohl
Oregon DEQ
Executive Building
811 SW Sixth Avenue
Portland, OR 97204

RE: Fluoride Results for Proficiency Testing Study DMRQA21.

Dear Ms. Johndohl

Wacker did not pass the Fluoride test in Proficiency Testing Study DMRQA21 (6/18/01 to 9/14/01). After reviewing our testing procedure, it appears the reason that we failed may have been due to an electrode calibration error. Our normal testing procedure calls for a two-point calibration at 1.0 ppm and 10.0 ppm as fluoride. This range brackets the normal fluoride concentration in our effluent. The DMRQA21 samples, vial #1 lot #12-41 M-PT and vial #2 lot #12-42M-PT, gave a fluoride concentration of 0.418 ppm.

We feel that since the electrode was not calibrated in the concentration range from 0.1 ppm to 1.0 ppm as fluoride, we may not have obtained a linear response from the electrode at the DMRQA21 sample concentration. This caused an "not acceptable" result for fluoride.

We will be conducting some in-house tests to verify this conclusion. Unfortunately, the fluoride electrode used for the DMRQA21 stopped working about three weeks after the DMRQA21 results were submitted. All additional tests will be performed using a new electrode.

If you have any questions, please contact me @ 503-219-7313.

Regards, J Claxton

WACKER SILTRONIC CORPORATION

Jim Claxton
Environmental Engineer

cc: Tom Rothschild
cc: Dianne Irish
cc: Justin Darr

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Wacker Siltronic Corporation
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY LOCATION: 7200 NW Front Ave.
Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(3-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	11	1	TO	2001	11	30
	(18-21)	(22-23)	(24-25)		(26-29)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(4 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	QUANTITY OR LOADING (54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	QUALITY OR CONCENTRATION (46-53) AVERAGE	QUALITY OR CONCENTRATION (54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	918,000	1,022,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	34.0	43.7	lbs/day	--	4.4	6.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	9.3	13.1	lbs/day	--	1.2	1.8	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.01	<0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	55.8	58.5	lbs/day	--	7.2	7.5	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 12 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER 072

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-49 WHICH MAY NOT BE USED.)

SCOEPA00023574

PERMITTEE NAME/ADDRESS (Include Facility/Location, if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-16) PERMIT NUMBER	(17-18) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	11	1	TO	2001	11	30
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 per violation, imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	01	12	11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023575

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY LOCATION: 7200 NW Front Ave.
Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	11	1	TO	2001	11	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
MV-3 Flow	SAMPLE MEASUREMENT	138,000	202,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 12 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023576

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2001	11	1	TO	2001	11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-66)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,056,000	1,206,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	69.0	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.2	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 01 | MO 12 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
11-21-01: Time: 5 minutes 56 seconds. pH: 9.4

SCOEPA00023577

WACKER
Wacker Siltronic Corporation

December 11, 2001 ER:073 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the November 2001 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **December 15, 2001**

SAMPLING PERIOD: November, 2001

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas G. McCue Date: 12/11/01

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2001 C pH SMR.dot

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, OR
Phone: (503) 219-~~7374~~ FAX: (503) ~~444~~ 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name:
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additional Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [ ] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials:

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date / Time		Media	Analysis Requested	Test/ Profile
01-128				11/27/01	1004		Total metals As, Mo.	
		not sent out						
Sample								

Sampled By: City of Portland, Dianne Irish
AUTHORIZED CUSTOMER SIGNATURE: Dianne Irish DATE: 11/27/01

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Megan Schubert	11/27/01	1004	Dianne Irish	11/27/01	1004
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

WACKER
Wacker Siltronic Corporation

ER: 074

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

Dear Dr. Zais,

You requested any additional metals data for Wacker's effluent. The following table lists metals results for the Combined Effluent.

Combined Effluent

Analyte	mg/L (ppm)	Analyte	mg/L (ppm)
Aluminum	0.05	Magnesium	2.0
Arsenic	<0.005	Manganese	0.027
Barium	0.002	Molybdenum	0.05
Cadmium	<0.002	Nickel	<0.005
Calcium	150	Selenium	<0.05
Chromium	<0.01	Silver	0.0003
Copper	0.011	Strontium	0.18
Iron	<0.2	Zinc	<0.01
Lead	<0.002		

Please call me if you have any questions at 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

J Claxton

Jim Claxton
Environmental Engineer

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	3332
CONNECTION TEL	95032296957
CONNECTION ID	
ST. TIME	12/12 12:03
USAGE T	00'20
PGS. SENT	2
RESULT	OK

Wacker Siltronic Corporation

Environmental Department

7200 NW Front Avenue
Portland, Oregon 97210-3676

Phone: (503) 219-7313
Fax: (503) 219-7599

FACSIMILE TRANSMITTAL SHEET

TO: Dr. Elliot Zais

FROM: Jim Claxton

FAX No: 503-229-6957

DATE: December 12, 2001

NUMBER OF PAGES (including this page): 2

MESSAGE/SPECIAL INSTRUCTIONS:

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:063.JWC

2003-December-9

November 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the November 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

Two events, approved by BES, occurred during this month:

1. November 19, Wacker began repairs on treatment equipment used to treat acid waste. The waste contains nitric acid and hydrofluoric acid. The waste acid was neutralized with lime and added to the normal wastewater (OWW) sent to the City POTW. Samples were taken to measure TSS and pH was continuously monitored. The pH did not exceed permit limits of 5.0 to 11.5. The TSS was higher than normal at about 600 ppm. A 24-hour composite sample was taken from 11/21 to 11/22 and gave a TSS of 161 ppm. The diversion lasted about 13 hours and increased the normal city waste stream discharge by about 250 gpm to about 680 gpm. The average discharge rate to the city for 2003 is about 410 gpm.

2. November 25, Wacker discharged 13 drums of well wastewater containing TTO up to 44.6 ppm. Each drum was separately metered into the city waste stream depending on its TTO concentration and the overall flow to the city POTW. The separate metering rates were used to insure that the permit limit of 1.37 ppm as TTO was not exceeded.

If you have any questions, please contact Jim Claxton.

Regards,

Jim Claxton for Tom McCue

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **December 15, 2003**

SAMPLING PERIOD: November, 2003

For Industrial Source Control Division Use Only	
Date Postmarked/Received	Date Entered
	Entered By
Comments:	

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C McCann Date: 12/9/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

11/30/2003

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	7,985	(100s of GALLONS)
CURRENT READING	109367	123,495	(100s of GALLONS)
CONSUMPTION	0	169,553	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,695,530	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,695,530	* 10 GAL / 7.48 GAL/CF =	2,266,751 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,266,751 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	38,647	(10s of GALLONS)
CURRENT READING	91,324	(10s of GALLONS)
CONSUMPTION	52,677	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	52,677	* 10 GAL / 7.48 GAL/CF=	70,424 CF

This meter reading was reported by: C. Justin Darr on 12/7/03
C. Justin Darr date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
Portland, Oregon 97203-5452

SCOEPA00023585

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676
Tel. 503 219 7313
Fax 503 219 7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER062:JC

December 9, 2003

Discharge Monitoring Report for November 2003

Dear Dr. Zais:

Enclosed is the November 2003 Discharge Monitoring Report for Wacker Siltronic Corporation NPDES permit number 101128, File Number 93450. Wacker Siltronic has operated in compliance with the Permit for this reporting period and has no discharge violations to report.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Discharge Monitoring Report

cc: Tom Rothschild
DMR File

COMMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16): 101128 PERMIT NUMBER
(17-19): Outfall 001 DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD
FROM YEAR (20-21) 2003 MO (22-23) 11 DAY (24-25) 1
TO YEAR (26-27) 2003 MO (28-29) 11 DAY (30-31) 30

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	814,000	1,191,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	36.0	51.7	lbs/day	--	6.0	7.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	13.4	33.6	lbs/day	--	2.1	3.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	33.7	58.7	lbs/day	--	5.3	6.8	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020
DATE: YEAR 03 MO 12 DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

SCOEPA00023587

SUBMITTER NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	11	1	TO	2003	11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

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PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	03	12	8
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023588

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16) (17-19)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	11	1	TO	2003	11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	269,000	428,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total hosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 12 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023589

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) 101128 PERMIT NUMBER

(17-19) Outfall 003 DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	11	1	TO	2003	11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,083,000	1,558,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall Temperature	SAMPLE MEASUREMENT	--	--	--	--	--	66.7	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.0	7.2	7.4			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 12 DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

L:\ENVIRONMENTAL\NPDES\NPDESPER.DOC

SCOEPA00023590

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:054.JWC

2003-November-10

October 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the October 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **November 15, 2003**

SAMPLING PERIOD: October, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received | Date Entered

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C McCann Date: 11/10/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

10/31/2003

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	758,400	(100s of GALLONS)
CURRENT READING	109367	945,320	(100s of GALLONS)
CONSUMPTION	0	186,920	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,869,200	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,869,200	* 10 GAL / 7.48 GAL/CF =	2,498,930 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,498,930 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,418,625	(10s of GALLONS)
CURRENT READING	9,481,853	(10s of GALLONS)
CONSUMPTION	63,228	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	63,228	* 10 GAL / 7.48 GAL/CF=	84,529 CF

This meter reading was reported by: C. Justin Darr on 11-5-03
C. Justin Darr — date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
Portland, Oregon 97203-5452

SCOEPA00023593

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676
Tel. 503 219 7313
Fax 503 219 7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER053:JC

Date November 10, 2003

Discharge Monitoring Report for October 2003

Dear Dr. Zais:

Enclosed is the October 2003 Discharge Monitoring Report for Wacker Siltronic Corporation NPDES permit number 101128, File Number 93450. Wacker Siltronic has operated in compliance with the Permit for this reporting period and has no discharge violations to report.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Discharge Monitoring Report

cc: Tom Rothschild
DMR File

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	10	1	TO	2003	10	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		(3 Card Only) QUANTITY OR LOADING AVERAGE	MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Process Waste Water Flow	SAMPLE MEASUREMENT	1,053,000	1,181,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	50.8	95.7	lbs/day	--	6.0	11.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	11.4	17.1	lbs/day	--	1.4	2.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.01	<0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	63.9	75.5	lbs/day	--	7.5	8.7	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

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Wacker Siltronic Corp. by:
Thomas G. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 11 | DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

SCOEPA00023595

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-16) PERMIT NUMBER: 101128

(17-18) DISCHARGE NUMBER: Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	10	1	TO	2003	10	31
	(19-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

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PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Wacker Siltronic Corp. by:

Thomas C McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 11 | DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023596

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Wacker Siltronic Corporation Site ID 93450
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY: 7200 NW Front Ave.
LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER	DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	10	1	TO	2003	10	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING (4 Card Only)			QUALITY OR CONCENTRATION (4 Card Only)				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
MV-3 Flow	SAMPLE MEASUREMENT	236,000	496,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas C McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 11 | DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023597

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2003	10	1	TO	2003	10	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,289,000	1,537,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	70.5	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.1	7.3	7.4			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:

Thomas C McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	03	11	6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

pH outages: 10/9: pH of 14, 3 sec, power blip. 10/12: pH of 10.8, 47mins 39 secs. Anion bed to drain during regeneration, sample valve was shut off when discovered.

SCOEPA00023598

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim.claxton@wacker.com

Wacker Siltronic Corporation.
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:050.JWC

2003-October-9

September 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the September 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

There was one high TSS result for sample date 9/4/03. The TSS measurement was 398 ppm. A 24-hour composite re-sample was taken 9/5/03 and the TSS measurement was 17.5 ppm. The average of all five samples is reported.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

9/30/2003

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	578,704	)s of GALLONS)
CURRENT READING	109367	758,400	)s of GALLONS)
CONSUMPTION	0	179,696	)s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,796,960	0s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,796,960	* 10 GAL / 7.48 GAL/CF =	2,402,353 CF
TOTAL THROUGH OVERFLOW LINE	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,402,353 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,373,233	(10s of GALLONS)
CURRENT READING	9,418,625	(10s of GALLONS)
CONSUMPTION	32,580	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	32,580	* 10 GAL / 7.48 GAL/CF=	43,556 CF

This meter reading was reported by C. Justin Darr on 10/9/03 (date)

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452
Portland, Oregon 97203-5452

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **October 15, 2003**

SAMPLING PERIOD: July - September, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
September 2003	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	SM-4500H	SU	0.1	5.0 - 11.5	N/A	
TTOs (Volatiles)	EPA 8260	0.01 mg/L	0.005	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	0.007 mg/L	0.002	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	134 mg/L	0.1	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: Thomas G McCue Date: 10/9/03

SCOEPA00023601

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **October 15, 2003**

SAMPLING PERIOD: September, 2003

For Industrial Source Control Division Use Only	
Date Postmarked/Received	Date Entered
	Entered By:
Comments:	

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	FOXBORO	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas G McGee Date: 10/9/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

SCOEPA00023602

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9.25.03 Oven Temp: 103 C Analyst: DI

Date In: 9.25.03 Time In/Out: 1135 / 1415

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0870	0.0870	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0880	0.0876	0.8
3	CE FAB-2	500	0.0875	0.0870	1.0
				Average CE FAB-2 TSS	0.9
4	OWW	100	0.0924	0.0870	54
5	OWW	100	0.0925	0.0876	49
				Average OWW TSS	50
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

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SCOEPA00023603

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9.18.03 Oven Temp: 103 C Analyst: DI

Date In: 9-18-03 Time In/Out: 1130 / 1415

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0870	0.0870	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0873	0.0869	0.8
3	CE FAB-2	500	0.0878	0.0874	0.8
				Average CE FAB-2 TSS	0.8
4	OWW	100	0.0954	0.0865	89
5	OWW	100	0.0965	0.0868	97
				Average OWW TSS	93
				Average TSS	

Comments: _____

_____

_____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

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SCOEPA00023604

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9.11.03 Oven Temp: 104 C Analyst: DI

Date In: 9.11.03 Time In/Out: 1120 / 1400

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0871	0.0871	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0875	0.0867	1.6
3	CE FAB-2	500	0.0885	0.0876	1.8
				Average CE FAB-2 TSS	1.7
4	OWW	100	0.0968	0.0856	112
5	OWW	100	0.0980	0.0867	113
				Average OWW TSS	112.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9-4-03 Oven Temp: 103 C Analyst: Di

Date In: 9-4-03 Time In/Out: 1115 / 1415

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0871	0.0871	
	CE FAB-1				
	CE FAB-1				
			Average CE FAB-1 TSS		
2	CE FAB-2	500	0.0893	0.0880	2.6
3	CE FAB-2	500	0.0887	0.0876	2.2
			Average CE FAB-2 TSS		2.4
4	OWW	50	0.1067	0.0871	392
5	OWW	50	0.1076	0.0874	404
			Average OWW TSS		398 ⓒ
			Average TSS		

Comments: ⓒ never set up OWW sample this am for another composite sample.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 9-5-03 Oven Temp: 103 C Analyst: Di

Date In: 9-5-03 Time In/Out: 0800 / 1100

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
	Blank	NA			
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
	CE FAB-2				
	CE FAB-2				
				Average CE FAB-2 TSS	
2	OWW	100	0.0895	0.0876	19
3	OWW	100	0.0885	0.0869	16
				Average OWW TSS	17.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.
POTW permit: daily max 350 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 17 Jun 2003 Revised

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SCOEPA00023607

Analytical Data

Wacker Siltronic

Job Number: A30904AE

Lab Sample ID: A30904AE-3
Field ID: 03-99-OWW-C
Date/Time: 09/04/03 0740
Matrix: Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Arsenic	EPA 200.8	0.002	0.007	mg/L

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023608

Analytical Data

Wacker Siltronic

Job Number: A30904AE

Lab Sample ID: A30904AE-4
Field ID: 03-100-OWW-G
Date/Time: 09/04/03 0740
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 09/10/03
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	1600.
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	6.
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	ND
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023609

Analytical Data

Wacker Siltronic

Job Number: A30904AE

Lab Sample ID: A30904AE-4
Field ID: 03-100-OWW-G
Date/Time: 09/04/03 0740
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 09/10/03
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	ND
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND
1,2,3-Trichloropropane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023610

Analytical Data

Wacker Siltronic

Job Number: A30904AE

Lab Sample ID: A30904AE-4
Field ID: 03-100-OWW-G
Date/Time: 09/04/03 0740
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 09/10/03
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
4-Bromofluorobenzene (Surr.)	---	---	90%
Dibromofluoromethane (Surr.)	---	---	115%
Toluene-d8 (Surr.)	---	---	103%
1,2-Dichloroethane-d4 (Surr.)	---	---	140%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Analytical Data

Wacker Siltronic

Job Number: A30904AE

Lab Sample ID: A30904AE-4
Field ID: 03-100-OWW-G
Date/Time: 09/04/03 0740
Matrix: Water

EPA Category: Extractable Organics
Analysis Performed: CLISolventScan; Solvent Scan.
Analysis Date: 09/05/03
Analyst: MKM

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Isopropanol	1.	ND	ND

Results expressed as mg/l unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023612

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2003	9	1	TO	2003	9	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	1,032,000	1,129,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	38.5	55.1	lbs/day	--	4.5	6.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	13.0	23.9	lbs/day	--	1.5	2.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	68.8	74.4	lbs/day	--	8.2	9.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.5	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1001 AND 33 USC 1319 (Penalties under these statutes may include fines up to $10,000 and up to additional imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 10 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER049

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-48 WHICH MAY NOT BE USED.)

SCOEPA00023613

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) 101128 — PERMIT NUMBER

(17-19) Outfall 001 — DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	9	1	TO	2003	9	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 10 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023614

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Wacker Siltronic Corporation Site ID 93450
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY: 7200 NW Front Ave.
LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(3-16) (17-19)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	9	1	TO	2003	9	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(I Card Only) QUANTITY OR LOADING (46-53) AVERAGE	QUANTITY OR LOADING (54-61) MAXIMUM	UNITS	(I Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	QUALITY OR CONCENTRATION (46-53) AVERAGE	QUALITY OR CONCENTRATION (54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	236,000	876,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.6	0.8	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 10 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023615

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR (30-31)	MO (32-33)	DAY (34-35)		YEAR (36-37)	MO (38-39)	DAY (40-41)
FROM	2003	9	1	TO	2003	9	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(4 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,268,000	1,823,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	74.2	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	6.9	7.0	7.1			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	03	10	8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023616

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wa[illegible] Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	8	1	TO	2003	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	975,000	1,134,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	30.5	34.7	lbs/day	--	3.8	4.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	15.7	24.3	lbs/day	--	1.9	2.8	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	0.01	0.02	lbs/day	--	<0.01	<0.01	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	68.0	76.9	lbs/day	--	8.4	8.9	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Thomas C McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	03	9	5
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

ERQ4. JWC
045

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-45 WHICH MAY NOT BE USED.)

SCOEPA00023617

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER
(3-11)	(12-19)

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	8	1	TO	2003	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 3 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 9 | DAY 5

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023618

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Wacker Siltronic Corporation Site ID 93450
ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY LOCATION: 7200 NW Front Ave.
Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 002

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR (30-31)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2003	8	1	TO	2003	8	31

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	171,000	298,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.5	0.6	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 9 | DAY 5

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023619

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	8	1	TO	2003	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,145,000	1,383,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	70.1	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.0	7.1	7.2			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 9 DAY 5

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

L:\ENVIRONMENTAL\NPDES\NPDESPER.DOC

SCOEPA00023620

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:044.JWC

2003-September-8

August 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the August 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

8/31/2003

1. OWW DISCHARGE

ACTUAL READINGS

	Fab. 1	FAB 2		
PAST READING	109367	406,713	(100s of GALLONS)	
CURRENT READING	109367	578,704	(100s of GALLONS)	
CONSUMPTION	0	171,991	(100s of GALLONS)	
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)	
TOTAL CONSUMPTION	1,719,910	(10s of GALLONS)		

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,719,910	* 10 GAL / 7.48 GAL/CF =	2,299,345	CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,299,345	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,345,070	(10s of GALLONS)
CURRENT READING	9,373,233	(10s of GALLONS)
CONSUMPTION	28,163	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	28,163	* 10 GAL / 7.48 GAL/CF=	37,651	CF

This meter reading was reported by: C. Justin Darr on 9/5/03
C. Justin Darr — date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023622

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **September 15, 2003**

SAMPLING PERIOD: August, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	FOXBORO	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas G McCann Date: 9/8/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676
Tel. 503 219 7313
Fax 503 219 7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER040:JC

August 27, 2003

Bioassay Results for 2003

Dear Dr. Zais:

The Bioassay of Wacker's effluent for 2003 **passes the requirements** of our NPDES permit, number 101128.

CH2MHill results for August 2003

Acute (48-hour) Results:	Survival (% Effluent)	
	Ceriodaphnia dubia	Pimephales promelas
NOEC	30%	30%
ZID Pass Criteria[1]	≥13.4%	≥13.4%

Chronic Results:	Survival (% Effluent)	
	Ceriodaphnia dubia	Pimephales promelas
NOEC	7.5%	30%
Mixing Zone Pass Criteria[1]	≥ 1.8%	≥ 1.8%

If you have any questions, please contact Jim Claxton at 503-219-7313.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
NPDES DMR File

[1] CH2MHILL. Mixing Zone Effluent Dilution Evaluations prepared for Wacker Siltronic Corporation in 1994, 1995 and 1996. The NPDES discharge permit defines, for Wacker's effluent discharge to the Willamette River, a zone of initial dilution (ZID) having a 5-foot radius from the point of discharge at Outfall 003, and a mixing zone having a 50-foot radius from the point of discharge at Outfall 003. The mixing zone dilution studies identified worst-case (0.1 feet/ second as current velocity) dilutions at distances of 5 and 50 feet from the discharge point of 7.5:1 and 55.5:1 ($Q_{Total}/Q_{Effluent}$) respectively. These dilutions are equivalent to 13.4% effluent at the edge of the ZID and 1.8% effluent at the edge of the mixing zone. According to the discharge permit, the effluent is considered to be acutely toxic if an acute test No-Observable-Effects-Concentration (NOEC) is less than 13.4% effluent, and is considered to be chronically toxic if a chronic test NOEC is less than 1.8% effluent. Conversely, the effluent is considered to be in compliance for toxicity if the acute test NOEC $\geq$ 13.4% effluent and the chronic test NOEC $\geq$ 1.8% effluent.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)
NAME: Wacker Siltronic Corporation Site ID 93450
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY: 7200 NW Front Ave.
LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16): 101128 PERMIT NUMBER
(17-18): Outfall 001 DISCHARGE NUMBER

MONITORING PERIOD
FROM: YEAR 2003 (20-21) MO 7 (22-23) DAY 1 (24-25)
TO: YEAR 2003 (26-27) MO 7 (28-29) DAY 31 (30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	895,000	1,142,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	27.2	32.8	lbs/day	--	3.4	4.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	16.5	26.2	lbs/day	--	2.1	3.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.01	0.02	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	60.7	80.8	lbs/day	--	7.6	10.3	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.4	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 8 DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER036

EPA Form 3320-1 (Rev. 8-82) Previous editions may be used. (REPLACES EPA FORM T-49 WHICH MAY NOT BE USED.)

SCOEPA00023625

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(3-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2003	7	1	TO	2003	7	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 8 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachment here)

SCOEPA00023626

PERMITTEE NAME/ADDRESS (Include Facility Name/Location/Agent)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	7	1	TO	2003	7	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	229,000	697,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas G McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	03	8	7
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023627

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	7	1	TO	2003	7	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,124,000	1,717,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	72.0	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	6.9	7.0	7.1			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 3 years)

Wacker Siltronic Corp. by:
Thomas G. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 8 DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

L:\ENVIRONMENTAL\NPDES\NPDESPER.DOC

SCOEPA00023628

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim.claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:035.JWC

2003-August-8

July 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the July 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this re porting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **August 15, 2003**

SAMPLING PERIOD: July, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received | **Date Entered**

Entered By

Comments

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C. McCann Date: 8/8/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
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Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:035.JWC

2003-August-8

July 2003 Industrial Discharge Report

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If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **August 15, 2003**

SAMPLING PERIOD: July, 2003

For Industrial Source Control Division Use Only	
Date Postmarked/Received	Date Entered
	Entered By
Comments:	

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit	
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.	

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C. McCann Date: 8/8/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

7/31/2003

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	406,713	(100s of GALLONS)
CURRENT READING	109367	217,785	(100s of GALLONS)
CONSUMPTION	0	188,928	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,889,280	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,889,280	* 10 GAL / 7.48 GAL/CF =	2,525,775 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,525,775 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,316,045	(10s of GALLONS)
CURRENT READING	9,345,070	(10s of GALLONS)
CONSUMPTION	29,025	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	29,025	* 10 GAL / 7.48 GAL/CF=	38,803 CF

This meter reading was reported by: Dianne Hurd per Justin Darr on 8/8/03.
C. Justin Darr date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023633

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16) 101128 PERMIT NUMBER
(17-19) Outfall 001 DISCHARGE NUMBER

MONITORING PERIOD
FROM YEAR (20-21) 2003 MO (22-23) 6 DAY (24-25) 1
TO YEAR (26-27) 2003 MO (28-29) 6 DAY (30-31) 30

Form Approved:
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	924,000	1,050,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	25.5	32.8	lbs/day	--	3.3	4.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	13.0	17.3	lbs/day	--	1.7	2.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	60.9	67.5	lbs/day	--	7.8	8.7	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020
DATE: YEAR 03 MO 7 DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER 034 JWC

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-48 WHICH MAY NOT BE USED.)

SCOEPA00023634

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	6	1	TO	2003	6	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 7 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023635

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER (3-16)	DISCHARGE NUMBER (17-19)
101128	Outfall 002

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2003	6	1	TO	2003	6	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	127,000	178,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Tom C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	NUMBER	DATE YEAR	MO	DAY
503	243-2020	03	7	7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023636

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	6	1	TO	2003	6	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,051,000	1,197,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	72.6	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.0	7.1	7.2			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		Wacker Siltronic Corp. by:	TELEPHONE		DATE		
Tom McCue Environmental Manager	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 USC § 1001 AND 33 USC § 1319. (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years.)	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	503	243-2020	03	7	7
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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SCOEPA00023637

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim_claxton@wacker.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:033.JWC

2003-July-8

June 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the June 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

6/30/2003

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	32,291	(100s of GALLONS)
CURRENT READING	109367	217,785	(100s of GALLONS)
CONSUMPTION	0	185,494	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,854,940	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,854,940	* 10 GAL / 7.48 GAL/CF =	2,479,866 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,479,866 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,296,159	(10s of GALLONS)
CURRENT READING	9,316,045	(10s of GALLONS)
CONSUMPTION	19,886	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	19,886	* 10 GAL / 7.48 GAL/CF=	26,586 CF

This meter reading was reported by: C. Justin Darr on 7/1/03
C. Justin Darr — date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023639

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **July 15, 2003**

SAMPLING PERIOD: June, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C McCann Date: 7/8/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **July 15, 2003**

SAMPLING PERIOD: April - June, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
June 2003	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	SM 4500-H	No Excursions SU	0.1	5.0 - 11.5	N/A	
TTOs (Volatiles)	EPA 8260	<0.01 mg/L	0.005	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	<0.0025 mg/L	0.0025	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	47.5 mg/L	0.1	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: Thomas G McCue Date: 7/8/03

SCOEPA00023641

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 6-5-03 Oven Temp: 103 C Analyst: DEI

Date In: 6-5-03 Time In/Out: 1110 / 1355

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0871	0.0871	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0886	0.0876	2
3	CE FAB-2	500	0.0857	0.0886	2.2
				Average CE FAB-2 TSS	2.1
4	OWW	100	0.0923	0.0881	42
5	OWW	100	0.0935	0.0882	53
				Average OWW TSS	47.5
				Average TSS	

Comments: _____

_____

_____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2002 Revised

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SCOEPA00023642

Analytical Data

Wacker Siltronic

Job Number: A30605BD
Page Number: 13 of 13

Lab Sample ID: A30605BD-4
Field ID: 03-73-OWW-G
Date/Time: 06/05/03 0710
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: CLISolventScan; Solvent Scan.
Analysis Date: 06/09/03
Analyst: MKM

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Isopropanol	2.	ND	ND

Results expressed as mg/l unless otherwise noted.
ND means none detected at or above the detection limit listed..

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023643

Analytical Data

Wacker Siltronic

Job Number: A30605BD
Page Number: 9 of 13

Lab Sample ID: A30605BD-3
Field ID: 03-72-OWW-C
Date/Time: 06/05/03 0710
Matrix: Waste Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units	Analysis Date	Analyst
Arsenic	EPA 200.8	0.0025	ND	mg/L	06/11/03	CV

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023644

Analytical Data

Wacker Siltronic

Job Number: A30605BD

Lab Sample ID: A30605BD-4
Field ID: 03-73-OWW-G
Date/Time: 06/05/03 0710
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/10/03
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	0.015	ND	5.3
Benzene	0.005	ND	ND
Bromobenzene	0.005	ND	ND
Bromochloromethane	0.005	ND	ND
Bromodichloromethane	0.005	ND	ND
Bromoform	0.005	ND	ND
Bromomethane	0.005	ND	ND
2-Butanone (MEK)	0.005	ND	ND
n-Butylbenzene	0.005	ND	ND
sec-Butylbenzene	0.005	ND	ND
tert-Butylbenzene	0.005	ND	ND
Carbon Disulfide	0.005	ND	ND
Carbon tetrachloride	0.005	ND	ND
Chlorobenzene	0.005	ND	ND
Chloroethane	0.005	ND	ND
2-Chloroethylvinyl ether	0.005	ND	ND
Chloroform	0.005	ND	ND
Chloromethane	0.005	ND	ND
2-Chlorotoluene	0.005	ND	ND
4-Chlorotoluene	0.005	ND	ND
1,2-Dibromo-3-chloropropane	0.005	ND	ND
Dibromochloromethane	0.005	ND	ND
1,2-Dibromoethane	0.005	ND	ND
Dibromomethane	0.005	ND	ND
1,2-Dichlorobenzene	0.005	ND	ND
1,3-Dichlorobenzene	0.005	ND	ND
1,4-Dichlorobenzene	0.005	ND	ND
Dichlorodifluoromethane	0.005	ND	ND
1,1-Dichloroethane	0.005	ND	ND
1,2-Dichloroethane	0.005	ND	ND

Results expressed as mg/l unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023645

Analytical Data

Wacker Siltronic

Job Number: A30605BD
Page Number: 11 of 13

Lab Sample ID: A30605BD-4
Field ID: 03-73-OWW-G
Date/Time: 06/05/03 0710
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/10/03
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	0.005	ND	ND
cis-1,2-Dichloroethene	0.005	ND	ND
trans-1,2-Dichloroethene	0.005	ND	ND
1,2-Dichloropropane	0.005	ND	ND
1,3-Dichloropropane	0.005	ND	ND
2,2-Dichloropropane	0.005	ND	ND
cis-1,3-Dichloropropene	0.005	ND	ND
trans-1,3-Dichloropropene	0.005	ND	ND
Ethylbenzene	0.005	ND	ND
Hexachlorobutadiene	0.005	ND	ND
2-Hexanone	0.005	ND	ND
Iodomethane	0.005	ND	ND
Isopropylbenzene	0.005	ND	ND
4-Isopropyltoluene	0.005	ND	ND
4-Methyl-2-pentanone	0.005	ND	ND
Methylene chloride	0.005	ND	ND
Naphthalene	0.005	ND	ND
n-Propylbenzene	0.005	ND	ND
Styrene	0.005	ND	ND
1,1,1,2-Tetrachloroethane	0.005	ND	ND
1,1,2,2-Tetrachloroethane	0.005	ND	ND
Tetrachloroethene	0.005	ND	ND
Toluene	0.005	ND	0.01
1,2,3-Trichlorobenzene	0.005	ND	ND
1,2,4-Trichlorobenzene	0.005	ND	ND
1,1,1-Trichloroethane	0.005	ND	ND
1,1,2-Trichloroethane	0.005	ND	ND
Trichloroethene	0.005	ND	ND
Trichlorofluoromethane	0.005	ND	ND
1,2,3-Trichloropropane	0.005	ND	ND

Results expressed as mg/l unless otherwise noted.
ND means none detected at or above the detection limit listed.

Analytical Data

Wacker Siltronic

Job Number: A30605BD

Lab Sample ID: A30605BD-4
Field ID: 03-73-OWW-G
Date/Time: 06/05/03 0710
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/10/03
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,4-Trimethylbenzene	0.005	ND	ND
1,3,5-Trimethylbenzene	0.005	ND	ND
Vinyl acetate	0.005	ND	ND
Vinyl chloride	0.005	ND	ND
m,p-Xylene	0.01	ND	ND
o-Xylene	0.005	ND	ND
4-Bromofluorobenzene (Surr.)	---	---	83%
Dibromofluoromethane (Surr.)	---	---	200%
Toluene-d8 (Surr.)	---	---	110%
1,2-Dichloroethane-d4 (Surr.)	---	---	190%

Results expressed as mg/l unless otherwise noted.
ND means none detected at or above the detection limit listed.

NOTE: The samples were analyzed twice with similar results. However the ccc did not pass rendering the results as estimated. The instrument is being serviced. The samples will be re-analyzed for confirmation of the results. The report will be changed if results change.

SCOEPA00023647

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name:
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additional Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: DS

FOR LABORATORY USE ONLY Page ___ of ___
Job Number:
Custabbr: ☐NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC#: #:
Billing Codes 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Time	Media	Analysis Requested	Test/ Profile
03-70-CE-C				6/5/03	0710		$Cr^{(T)}$, BOD	
03-71-CE-G				6/5/03	0710		8260, 8270 1-2 Diphenylhydrazine	
03-72 OWW-C				6/5/03	0710		Total As EPA 200.8	
03-73 OWW-G				6/5/03	0710		8260 + IPA	

Sampled By: Dianne Lusk AUTHORIZED CUSTOMER SIGNATURE: Dianne Lusk DATE: 6/5/03

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Lusk	6/5/03	0930		6/5/03	0930
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023648

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Mr. Dennis Jurries
Department of Environmental Quality Northwest Water Quality Division
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER:026.JWC

2003-June-26

Annual Storm water monitoring data for July 1, 2002 to June 30, 2003

Dear Mr. Jurries,

Enclosed is the storm water monitoring data as required by Wacker Siltronic's NPDES Storm Water Discharge Permit number 1200-Z issued on December 23, 1997. Sampling was conducted November 12, 2002 and June 15, 2003 meeting the requirement of conducting two monitoring events per sample point between July 1, 2002 and June 30, 2003.

Enclosed are copies of the monitoring results (including lab report and chain of custody) and copies of Monthly Visual Monitoring Reports. All results are well below the benchmark guideline concentrations.

If you have any questions, please contact Jim Claxton at 503-219-7313.

Best regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
Industrial Stormwater Program, City of Portland BES
SW Report 2003 File

Bureau of Environmental Services

Industrial Source Control Division

INDUSTRIAL STORMWATER

NPDES 1200-Z MONITORING REPORT

Industry Name: Wacker Siltronic Corporation

Site Address: 7200 NW Front Avenue, Portland, OR 97210-3676

The permittee shall monitor stormwater **twice** per year for the parameters outlined in their NPDES 1200-Z Stormwater Discharge Permit Schedule B.1.a., and submit results to the City as stated in Schedule D.2.

Stormwater samples were taken for the above permittee, on these days and at these sample points:

Sample Date(s)	Sample Point(s)
11/12/02	North, East and South
5/15/03	North, East and South

The permittee shall submit by **July 15** of each year a copy of the **laboratory analysis reports**, which show analytical methods and detection limits, for stormwater samples collected for the previous monitoring year (July 1-June 30).

☐ **Monitoring Waiver Reduction Notification**:
Check the box if your facility is exercising a waiver of monitoring based on meeting benchmarks listed in Schedule A.9., AND site conditions have not changed to impact stormwater run-off. Note: This does not exclude your facility from notifying DEQ about the waiver of monitoring. Please read Schedule B of the permit to clearly understand the monitor waiver reduction guidelines. If waiver request is for select pollutants, list the parameters excluded from monitoring: _____.

☐ **No Exposure Certification**:
Check the box if your facility is required to have a NPDES 1200-Z permit, but monitoring is not required due to no exposure of stormwater to industrial activities. This no exposure certification is outlined in Schedule B.3.b, and the facility meets the requirements of Schedule B.1.e. Note: This does not exclude your facility from notifying DEQ.

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

Signature: Thomas C McCue

Title: Thomas McCue, Environmental Manager

Date: 6/26/03

SCOEPA00023650

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Industrial Stormwater City of Portland
Industrial Stormwater Program
Department of Environmental Quality
6543 N Burlington Avenue
Portland, Oregon 97203-5452

ER:027.JWC

2003-June-26

Annual Storm water monitoring data for July 1, 2002 to June 30, 2003

Enclosed is the storm water monitoring data as required by Wacker Siltronic's NPDES Storm Water Discharge Permit number 1200-Z issued on December 23, 1997. Sampling was conducted November 12, 2002 and june 15, 2003 meeting the requirement of conducting two monitoring events per sample point between July 1, 2002 and June 30, 2003.

Enclosed are copies of the monitoring results (including lab report and chain of custody). All results are well below the benchmark guideline concentrations.

If you have any questions, please contact Jim Claxton at 503-219-7313.

Best regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
Department of Environmental Quality
SW Report 2002 File

Bureau of Environmental Services

Industrial Source Control Division

INDUSTRIAL STORMWATER

NPDES 1200-Z MONITORING REPORT

Industry Name: Wacker Siltronic Corporation

Site Address: 7200 NW Front Avenue, Portland, OR 97210-3676

The permittee shall monitor stormwater **twice** per year for the parameters outlined in their NPDES 1200-Z Stormwater Discharge Permit Schedule B.1.a., and submit results to the City as stated in Schedule D.2.

Stormwater samples were taken for the above permittee, on these days and at these sample points:

Sample Date(s)	Sample Point(s)
11/12/02	North, East and South
5/15/03	North, East and South

The permittee shall submit by **July 15** of each year a copy of the **laboratory analysis reports**, which show analytical methods and detection limits, for stormwater samples collected for the previous monitoring year (July 1-June 30).

☐ **Monitoring Waiver Reduction Notification**:
Check the box if your facility is exercising a waiver of monitoring based on meeting benchmarks listed in Schedule A.9., AND site conditions have not changed to impact stormwater run-off. Note: This does not exclude your facility from notifying DEQ about the waiver of monitoring. Please read Schedule B of the permit to clearly understand the monitor waiver reduction guidelines. If waiver request is for select pollutants, list the parameters excluded from monitoring: _____.

☐ **No Exposure Certification**:
Check the box if your facility is required to have a NPDES 1200-Z permit, but monitoring is not required due to no exposure of stormwater to industrial activities. This no exposure certification is outlined in Schedule B.3.b, and the facility meets the requirements of Schedule B.1.e. Note: This does not exclude your facility from notifying DEQ.

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

Signature: Thomas C. McCue

Title: Thomas McCue, Environmental Manager

Date: 6/26/03

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	11-12-02	
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

11/12/02 SAMPLING

PARAMETER	BENCHMARK[1]	UM	DATE:	11-12-02	
			North	East	South
Total Copper	0.1	Mg/l	0.03	<0.03	<0.03
Total Lead	0.4	Mg/l	<0.005	<0.005	<0.005
Total Zinc	0.6	Mg/l	0.18	0.24	0.09
pH	5.5-9	Su	6.4	6.6	7.1
TSS	130	Mg/l	6.9	7.5	3.3
Oil and Grease	10	Mg/l	4.0	4.0	< 3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

SCOEPA00023653

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: North (outfall) Sample ID#: 02-138-N

Date: 11/12/02 Time: 1320 Sampled by: Tom Rothschuler & Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 26.6 F-, mg/L: 0.32 pH: 6.4

TSS, mg/L: 6.9 Nitrate, mg/L: 0.44

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: 4 (1)

Metals(EPA 200.8), mg/L:

Copper: 0.03 (1) Lead: <0.005 (1) Zinc: 0.18 (1)

Notes:
(1) ZJR 6 Dec 2002

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 11/12/02 Oven Temp: 104 C Analyst: DL

Date In: 11/12/02 Time In/Out: 1400 / 1400 11/13/02

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0885	0.0885	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
28. North	500	0.0917	0.0883	6.8
3X. North	500	0.0918	0.0883	7
		Average TSS		6.9

Comments: Storm Water North

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.

[redacted]tional Pollution Discharge Elimination System [redacted]mit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023655

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 11/12/02 Sample Date: 11/12/02 Analyst: DI

COD Reactor Temperature: 150 C

Time In / Out: 1400 / 1600 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.

2. Zero the DR/4000 with an RODI H_2O blank.

3. Check the 30mg/L standard: 29.8 mg/L (Range: 28 - 32 mg/L)

4. ~~CE~~ North (composite): 26.6 mg/L.

5. OWW (composite): Direct DR/4000 reading: _____mg/L

(Dilution: ____ ml in ____ ml RODI H_2O)

X ____ (Dilution Factor) = _____mg/L

Comments: Storm Water North

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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SCOEPA00023656

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 11/12/02 Sample Date: 11/12/02 Analyst: Di

Slope: -56.1 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A2143 Date Opened: 10.31.02

10.0 mg/L: Lot #: A2175 Date Opened: 10.31.02

Data:

Sample	Fluoride, mg/L
CE FAB 1	
~~CE FAB-2~~ North	0.32

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	North
After Spike Concentration:	____ mg/L	____ mg/L	2.2 mg/L
Recovery:	____ %	____ %	94 %

Comments: Storm Water North.

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

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BENCHSHEET

NITRATE ANALYSIS

Test Date: 11.12.02 Sample Date: 11.12.02 Analyst: DJ

Data:

Sample	Nitrate Nitrogen(N)	x Dilution	x 4.4* =	Nitrate, mg/L
North	0.1	x n/a	x 4.4 =	0.44
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

Sample:	~~et~~		
After Spike Concentration:	1.0 mg/L	mg/L	mg/L
Recovery:	90 %	%	%

Notes: Storm Water North.

Waste is to be disposed in satellite Cadmium Waste container

References: 1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 23 Apr 2002 Revised

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SCOEPA00023658

Analytical Data

Wacker Siltronic

Job Number: A21114AE

Lab Sample ID: A21114AE-1
Field ID: 02-138-N
Date/Time: 11/12/02 1320
Matrix: Storm Water NORTH

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	4.	mg/L
Copper	EPA 200.7	0.03	0.03	mg/L
Zinc	EPA 200.7	0.05	0.18	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

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p.2
SCOEPA00023659

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: East Sample ID#: 02-139-E

Date: 11/12/02 Time: 1345 Sampled by: JR + JD

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 35.1 F-, mg/L: 0.31 pH: 6.6

TSS, mg/L: 7.5 Nitrate, mg/L: 0.44

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: 4 (1)

Metals(EPA 200.8), mg/L:

Copper: <0.03 (1) Lead: <0.005 (1) Zinc: 0.24 (1)

Notes:
(1) JR 6 Dec 2002

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 11/12/02 Oven Temp: 104 C Analyst: DJ

Date In: 11/12/02 Time In/Out: 1400 / 1400 11/13/02

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA			
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
8. East	500ml	0.0929	0.0893	7.2
9. East	500ml	0.0926	0.0887	7.8
		Average TSS		7.5

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: ermit: monthly avg. 23 mg/L, daily max. 61 mg/L.

R[redacted] dard Methods for the Examination of Water and ewater, 1998, 20th Edition, Section 2540 D, 2-57.
onal Pollution Discharge Elimination System nit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023661

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 11.12.02 Sample Date: 11.12.02 Analyst: Di

COD Reactor Temperature: 150 C

Time In / Out: 1400 / 1600 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: 29.8 mg/L (Range: 28 - 32 mg/L)
4. ~~CE (composite)~~ East: 35.1 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Stormwater East -

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 11·12·02 Sample Date: 11·12·02 Analyst: Di

Slope: -56.1 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A2143 Date Opened: 10·31·02

10.0 mg/L: Lot #: A2175 Date Opened: 10·31·02

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
~~North~~ East	0.31

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	East
After Spike Concentration:	____ mg/L	____ mg/L	2.1 mg/L
Recovery:	____ %	____ %	89.5 %

Comments: Stormwater East

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023663

BENCHSHEET

NITRATE ANALYSIS

Test Date: 11·12·02 Sample Date: 11·12·02 Analyst: DJ

Data:

Sample	Nitrate Nitrogen(N)	x Dilution	x 4.4*=	Nitrate, mg/L
East	0.1	x N/A	x 4.4 =	0.44
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

Sample:	East		
After Spike Concentration:	0.9 mg/L	mg/L	mg/L
Recovery:	80 %	%	%

Notes: Storm) Water East

Waste is to be disposed in satellite Cadmium Waste container

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI · 23 Apr 2002 Revised

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SCOEPA00023664

Analytical Data

Wacker Siltronic

Job Number: A21114AE
Page Number: 3 of 4

Lab Sample ID: A21114AE-2
Field ID: 02-139-E
Date/Time: 11/12/02 1345
Matrix: Storm Water

EAST

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	4.	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.24	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

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Dec 06 02 01:51p

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SCOEPA00023665

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: South Sample ID#: 02-140-S

Date: 11/12/02 Time: 1335 Sampled by: Tom Rothschild
Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 24.1 F-, mg/L: 5.1 pH: 7.1

TSS, mg/L: 3.3 Nitrate, mg/L: 9.21

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3 (1)

Metals(EPA 200.8), mg/L:

Copper: <0.03 (1) Lead: <0.005 (1) Zinc: 0.09 (1)

Notes:
(1) TJR 6Dec2002

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 11/12/02 Sample Date: 11/12/02 Analyst: DC

Slope: -56.1 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A2143 Date Opened: 10-31-02

10.0 mg/L: Lot #: A2175 Date Opened: 10-31-02

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
02-140-5	5.1

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	02-140-5
After Spike Concentration:	____ mg/L	____ mg/L	7.1 mg/L
Recovery:	____ %	____ %	100 %

Comments: Storm Water South

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

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BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 11/12/02 Sample Date: 11/12/02 Analyst: DJ

COD Reactor Temperature: 150 C

Time In / Out: 1400 / 1600 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: 29.8 mg/L (Range: 28 - 32 mg/L)
4. ~~CE~~ South (composite): 24.1 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Storm Water South

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 11/12/02 Oven Temp: 104 C Analyst: DJ

Date In: 11/12/02 Time In/Out: 1400 / 1400 11/13/02

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0885	0.0885	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
8. South	500ml	0.0878	0.0896	3.6
9. South	500 ml	0.0886	0.0901	3
		Average TSS		3.3

Comments: Storm Water South

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wa[redacted] 1998, 20th Edition, Section 2540 D,

2. [redacted] ion Discharge Elimination System

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023669

BENCHSHEET

NITRATE ANALYSIS

Test Date: 11/12/02 Sample Date: 11/12/02 Analyst: DI

Data:

Sample	Nitrate Nitrogen (N)	x Dilution	x 4.4* =	Nitrate, mg/L
South	2.1	x N/A	x 4.4 =	9.21
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

	Sample: South		
After Spike Concentration:	3.1 mg/L	mg/L	mg/L
Recovery:	100 %	%	%

Notes: Storm Water South

Waste is to be disposed in satellite Cadmium Waste container

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI . 12 Nov 2002 Revised

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SCOEPA00023670

Analytical Data

Wacker Siltronic

Job Number: A21114AE
Page Number: 4 of 4

Lab Sample ID: A21114AE-3
Field ID: 02-140-S
Date/Time: 11/12/02 1335
Matrix: Storm Water

SOUTH

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664	3.	ND	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.09	mg/L
Lead	EPA 239.2	0.005	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Dec 06 02 01:52p
p.4
SCOEPA00023671

RECEIVED DEC 6 2002

Report Date: December 6, 2002
Job Number: A21114AE
PO Number: 4500075102
Project No: None Provided
Project Name: Stormwater Fall 2002

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 11/14/02 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A21114AE-1	02-138-N	Storm Water	11/12/02	1320
A21114AE-2	02-139-E	Storm Water	11/12/02	1345
A21114AE-3	02-140-S	Storm Water	11/12/02	1335

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Mark W. Jael

Technical Services

TS /atc

Coffey Laboratories, Inc.
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Dec 06 02 01:51p

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SCOEPA00023672

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: Storm Water Fall-02
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additional Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: DT

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐ NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC: $ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Time	Media	Analysis Requested	Test/ Profile
02-138-N				11/12/02	1320		Oil & Grease (EPA 1664) Cu, Pb, Zn (EPA 200.8)	
02-139-E				11/12/02	1345		Oil & Grease (EPA 1664) Cu, Pb, Zn (EPA 200.8)	
02-140-S				11/12/02	1335		Oil & Grease (EPA 1664) Cu, Pb, Zn (EPA 200.8)	

Sampled By: Tom Rothschild & Justin Darr
AUTHORIZED CUSTOMER SIGNATURE: Dianne Thuot DATE: 11/12/02

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Thuot	11/14/02	0830		11/14/02	1105
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023673

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	5/15/03	Di
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

5/15/03 SAMPLING

PARAMETER	BENCHMARK[1]	UM	DATE:	5/15/03	Di
			North	East	South
Total Copper	0.1	Mg/l	<0.03	<0.03	<0.03
Total Lead	0.4	Mg/l	<0.005	<0.005	<0.005
Total Zinc	0.6	Mg/l	0.26	0.17	0.23
pH	5.5-9	Su	7.12	6.46	7.12
TSS	130	Mg/l	5.5	14.7	105.6
Oil and Grease	10	Mg/l	<3.0	<3.0	<3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: North Sample ID#: 03-59-N

Date: 5/15/03 Time: 1010 Sampled by: JR + MS

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 23.1 F-, mg/L: 0.3 pH: 7.12

TSS, mg/L: 5.5 Nitrate, mg/L: 1.32

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3.0

Metals(EPA 200.8), mg/L:

Copper: ~~<0.003~~ Di <0.03 Lead: <0.005 Zinc: 0.26

Notes: North @ Outfall

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 5/15/03 Sample Date: 5/15/03 Analyst: DI

Slope: -58.9 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A2301 Date Opened: 4/24/03

10.0 mg/L: Lot #: A2267 Date Opened: 4/17/03

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
03-59	0.3

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1209153

	CE FAB-1	CE FAB-2	03-59
After Spike Concentration:	____ mg/L	____ mg/L	2.1 mg/L
Recovery:	____ %	____ %	90 %

Comments: Storm water North #03-59

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023676

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5/15/03 Oven Temp: 104 C Analyst: DT

Date In: 5/15/03 Time In/Out: 1145 / 1425

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank		0.0870	0.0870	
				Average TSS	
2	03-59	500	0.0892	0.0866	5.2
3	03-59	500	0.0893	0.0864	5.8
				Average TSS	5.5
4	03-60	500	0.0943	0.0871	14.4
5	03-60	500	0.0949	0.0874	15
				Average TSS	~~5.88~~ 14.7
6	03-61	500	0.0879	0.0866	2.6
7	03-61	500	0.0882	0.0871	2.2
				Average TSS	2.4

Notes: Storm Water North # 03-59
Storm water East #03-60
Storm water South # 03-61

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Reference: [redacted]erating Procedure, Total Suspended

TJR 21 Mar 1987
DEM 12 Sep 1997 Revised

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BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 5/15/03 Sample Date: 5/15/03 Analyst: ~~AJ~~

COD Reactor Temperature: 150 C

Time In / Out: 1100 / 1300 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.

2. Zero the DR/4000 with an RODI H_2O blank.

3. Check the 30mg/L standard: 29.8 mg/L (Range: 28 - 32 mg/L)

4. ~~CB (composite)~~ 03-59: 29Di 23.1 mg/L.

5. OWW (composite): Direct DR/4000 reading: _____mg/L

(Dilution: ____ ml in ____ ml RODI H_2O)

X ____ (Dilution Factor) = _____mg/L

Comments: Storm Water North #03-59

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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SCOEPA00023678

BENCHSHEET

NITRATE ANALYSIS

Test Date: 5/15/03 Sample Date: 5/15/03 Analyst: DJ

Data:

Sample	Nitrate Nitrogen (N)		Dilution		4.4*	=	Nitrate, mg/L
03-59	0.3	x	N/A	x	4.4	=	1.320
		x		x	4.4	=	
		x		x	4.4	=	
		x		x	4.4	=	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

Sample:	03-59		
After Spike Concentration:	1.2 mg/L	mg/L	mg/L
Recovery:	%	%	%

Notes: Stormwater North # 03-59

Waste is to be disposed in satellite Cadmium Waste container

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8171, Mid Range:0-5.0 mg/L Cadmium Reduction Method. HACH Program 2520.

TJR/JB 27 Jun 1996
DEI 12 Nov 2002 Revised

SCOEPA00023679

Sample Identification

Lab Sample ID#: A30516AJ-1 03-59-N

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	ND mg/L	EPA 200.7	0.03 mg/L	MAJ
Lead	ND mg/L	EPA 239.2	0.005 mg/L	CV
Total Oil & Grease	ND mg/L	EPA 1664	3. mg/L	NAC
Zinc	0.26 mg/L	EPA 200.7	0.05 mg/L	MAJ

ND means none detected at or above the detection limit listed.

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: East Sample ID#: 03-60-E

Date: 5/15/03 Time: 1030 Sampled by: JR MS

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 32.8 F-, mg/L: 0.18 pH: 6.46

TSS, mg/L: 14.7 Nitrate, mg/L: 0.88

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3.0

Metals(EPA 200.8), mg/L:

Copper: <0.03 Lead: <0.005 Zinc: 0.17

Notes: East @ Bldg (In between administration bldg. & FAB 1. Small oil sheen in Fab 1 Parking Lot noted by Environmental Dept./Myron Burt. JR

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET EAST

FLUORIDE ANALYSIS

Test Date: 5/15/03 Sample Date: 5/15/03 Analyst: DJ

Slope: -58.9 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A2301 Date Opened: 4/24/03

10.0 mg/L: Lot #: A2267 Date Opened: 4/17/03

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
#03-60	0.18

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1209153

	CE FAB-1	CE FAB-2	#03-60
After Spike Concentration:	____ mg/L	____ mg/L	1.9 mg/L
Recovery:	____ %	____ %	86 %

Comments: Storm water East - # 03-60

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

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EAST

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 5/15/03 Sample Date: 5/15/03 Analyst: Di

COD Reactor Temperature: 150 C

Time In / Out: 1100 / 1300 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: 29.8 mg/L (Range: 28 - 32 mg/L)
4. ~~CE-1 (composite)~~ 03-6: 32.8 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Storm water Sample East # 0360

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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EAST

BENCHSHEET

NITRATE ANALYSIS

Test Date: 5/15/03 Sample Date: 5/15/03 Analyst: DI

Data:

Sample	Nitrate Nitrogen (N)	x Dilution	x 4.4* =	Nitrate, mg/L
03-60	0.2	x N/A	x 4.4 =	0.880
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

Sample:	0360		
After Spike Concentration:	1.0 mg/L	mg/L	mg/L
Recovery:	80 %	%	%

Notes: Storm water East - #03-60

Waste is to be disposed in satellite Cadmium Waste container

References: 1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8171, Mid Range:0-5.0 mg/L Cadmium Reduction Method. HACH Program 2520.

TJR/JB 27 Jun 1996
DEI . 12 Nov 2002 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS) EAST

Sample Date: 5/15/03 Oven Temp: 104 C Analyst: DI

Date In: 5/15/03 Time In/Out: 1145 / 1425

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank		0.0870	0.0870	
				Average TSS	
2	03-59	500	0.0892	0.0866	5.2
3	03-59	500	0.0893	0.0864	5.8
				Average TSS	5.5
4	03-60	500	0.0943	0.0871	14.4
5	03-60	500	0.0949	0.0874	15
				Average TSS	~~5.8~~ 14.7
6	03-61	500	0.0879	0.0866	2.6
7	03-61	500	0.0882	0.0871	2.2
				Average TSS	2.4

Notes: Storm Water North # 03-59
Storm water East #03-60
Storm water South # 03-61

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Reference Operating Procedure, Total Suspended
).

TJR 21 Mar 1987
DEM 12 Sep 1997 Revised

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SCOEPA00023685

Sample Identification

Lab Sample ID#: A30516AJ-2 03-60-E

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	ND mg/L	EPA 200.7	0.03 mg/L	MAJ
Lead	ND mg/L	EPA 239.2	0.005 mg/L	CV
Total Oil & Grease	ND mg/L	EPA 1664	3. mg/L	NAC
Zinc	0.17 mg/L	EPA 200.7	0.05 mg/L	MAJ

ND means none detected at or above the detection limit listed.

SCOEPA00023686

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: South Sample ID#: 03-61-S

Date: 5/15/03 Time: 1000 Sampled by: JR & MS

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 20.6 F-, mg/L: 5.7 pH: 7.12

TSS, mg/L: 2.4 Nitrate, mg/L: 105.6

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3.0

Metals(EPA 200.8), mg/L:

Copper: <0.03 Lead: <0.005 Zinc: 0.23

Notes: South @ Manhole by NOx

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

South

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5/15/03 Oven Temp: 104 C Analyst: DI

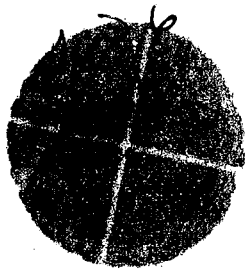
Date In: 5/15/03 Time In/Out: 1145 / 1425

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank		0.0870	0.0870	
				Average TSS	
2	03-59	500	0.0892	0.0866	5.2
3	03-59	500	0.0893	0.0864	5.8
				Average TSS	5.5
4	03-60	500	0.0943	0.0871	14.4
5	03-60	500	0.0949	0.0874	15
				Average TSS	~~5.5~~ 14.7
6	03-61	500	0.0879	0.0866	2.6
7	03-61	500	0.0882	0.0871	2.2
				Average TSS	2.4

Notes: Storm water North # 03-59
Storm water East #03-60
Storm water South # 03-61

Calculation: mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Refere[illegible]erating Procedure, Total Suspended [illegible]).



TJR 21 Mar 1987
DEM 12 Sep 1997 Revised

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SCOEPA00023688

BENCHSHEET South

FLUORIDE ANALYSIS

Test Date: 5-15-03 Sample Date: 5-15-03 Analyst: Di

Slope: -58.9 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A2301 Date Opened: 4/24/03

10.0 mg/L: Lot #: A2267 Date Opened: 4/17/03

Data:

Sample		Fluoride, mg/L
CE FAB 1		
CE FAB-2	03-61	5.7

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1209153

	CE FAB-1	CE FAB-2	03-61
After Spike Concentration:	____ mg/L	____ mg/L	7.4 mg/L
Recovery:	____ %	____ %	85 %

Comments: Storm water South #03-61

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

SCOEPA00023689

South

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 5/15/03 Sample Date: 5/15/03 Analyst: DJ

COD Reactor Temperature: 150 C

Time In / Out: 1100 / 1300 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: 29.8 mg/L (Range: 28 - 32 mg/L)
4. ~~CE (composite):~~ 03-61 20.6 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Storm water South #03-61

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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South

BENCHSHEET

NITRATE ANALYSIS

Test Date: 5/15/03 Sample Date: 5-15-03 Analyst: DI

Data:

Sample	Nitrate Nitrogen (N)	x Dilution	x 4.4* =	Nitrate, mg/L
03-61	2.4	x (1:10)	x 4.4 =	105.6
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: Hach
Lot Number: A1361

	Sample: 03-61		
After Spike Concentration:	3.3 mg/L	mg/L	mg/L
Recovery:	90 %	%	%

Notes: Storm water South - 03-61

Waste is to be disposed in satellite Cadmium Waste container

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8171, Mid Range:0-5.0 mg/L Cadmium Reduction Method. HACH Program 2520.

TJR/JB 27 Jun 1996
DEI 12 Nov 2002 Revised

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SCOEPA00023691

Sample Identification

Lab Sample ID#: A30516AJ-3 03-61-S

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	ND mg/L	EPA 200.7	0.03 mg/L	MAJ
Lead	ND mg/L	EPA 239.2	0.005 mg/L	CV
Total Oil & Grease	ND mg/L	EPA 1664	3. mg/L	NAC
Zinc	0.23 mg/L	EPA 200.7	0.05 mg/L	MAJ

ND means none detected at or above the detection limit listed.

SCOEPA00023692

Report Date: 06/02/2003
Job Number: A30516AJ
PWSID:
PO Number: 4500075102
Project No.: None Provided
Project Name: 2003 Stormwater Spring

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210

Sample Information

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A30516AJ-1	03-59-N	Storm Water	05/15/2003	1010
A30516AJ-2	03-60-E	Storm Water	05/15/2003	1030
A30516AJ-3	03-61-S	Storm Water	05/15/2003	1000

Analytical results are on the following page(s).

Sincerely,

Technical Services

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

TS/atc

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 NW Front Ave
Portland, Oregon
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: 2003 Storm Water Spring
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: Di

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐ NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Time	Media	Analysis Requested	Test/ Profile
03-59-N				5/15/03	1010		Oil & Grease - EPA 1664 Total Pb+Zn+Cu EPA 200.8	
03-60-E				5/15/03	1030		Oil & Grease EPA 1664, Total Pb, Zn, Cu EPA 200.8	
03-61-S				5/15/03	1000		Oil & Grease EPA 1664, Total Pb, Zn, Cu EPA 200.8	

Sampled By: Dianne Lusch
AUTHORIZED CUSTOMER SIGNATURE Dianne Lusch DATE: 5/15/03

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Lusch	5/15/03	1045		5/15/03	1045
				LAB		

White Copy-Laboratory Yellow Copy -Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging): VISUAL INSPECTIONS 7/02 - 6/03

PARAMETER	BENCHMARK[1]	UM	DATE:	7/18/02	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

* See Below *

PARAMETER	BENCHMARK[1]	UM	DATE:	8-31-02	
			North	South	East
Floating Solids	No visible discharge	Yes or No			
Oil and Grease Sheen*	No visible sheen	Yes or No			

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

* Monthly visual observations not done due to insufficient rainfall. DH

SCOEPA00023696

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	9.30.02	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	10-31-02	
			North	South	East
Floating Solids	No visible discharge	Yes or No	(1)	(1)	(1)
Oil and Grease Sheen*	No visible sheen	Yes or No			

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

(1) monthly visual observations not done due to insufficient rainfall DI

SCOEPA00023698

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	11-12-02	
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:	11-12-02	
			North	East	South
Total Copper	0.1	Mg/l	0.03	<0.03	<0.03
Total Lead	0.4	Mg/l	<0.005	<0.005	<0.005
Total Zinc	0.6	Mg/l	0.18	0.24	0.09
pH	5.5-9	Su	6.4	6.6	7.1
TSS	130	Mg/l	6.9	7.5	3.3
Oil and Grease	10	Mg/l	4.0	4.0	< 3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	12-26-02	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

SCOEPA00023700

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	1-22-03	
			North	South	East
Floating Solids	No visible discharge	Yes or No	NO	NO	NO
Oil and Grease Sheen*	No visible sheen	Yes or No	NO	NO	NO

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	2/28/03	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

SCOEPA00023702

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	3/27/03	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	4/1/03	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

SCOEPA00023704

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	30 Apr 2003	JJR
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	5/15/03	Di
			North	East	South
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:	5/15/03	Di
			North	East	South
Total Copper	0.1	Mg/l	<0.03	<0.03	<0.03
Total Lead	0.4	Mg/l	<0.005	<0.005	<0.005
Total Zinc	0.6	Mg/l	~~*~~ 0.26	0.17	0.23
pH	5.5-9	Su	7.12	6.46	7.12
TSS	130	Mg/l	5.5	14.7	105.6
Oil and Grease	10	Mg/l	<3.0	<3.0	<3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Jim Claxton in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Jim Claxton.

SCOEPA00023706

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

101128	Outfall 001
PERMIT NUMBER (5-16)	DISCHARGE NUMBER (17-19)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2003	5	1	TO	2003	5	31

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	918,000	976,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	34.5	40.4	lbs/day	--	4.4	5.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	11.9	17.7	lbs/day	--	1.5	2.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.01	<0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	61.6	69.6	lbs/day	--	7.9	8.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 6 DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

ER: 025jwc

EPA Form 3320-1 (Rev. 8-83) Previous editions may be used. (REPLACES EPA FORM T-45 WHICH MAY NOT BE USED.)

SCOEPA00023707

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	5	1	TO	2003	5	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Wacker Siltronic Corp. by:

Thomas C McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	03	6	6
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023708

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(1-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2003	5	1	TO	2003	5	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	157,000	263,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE

AREA CODE	NUMBER
503	243-2020

DATE

YEAR	MO	DAY
03	6	6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023709

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR (30-31)	MO (32-33)	DAY (34-35)		YEAR (36-37)	MO (38-39)	DAY (40-41)
FROM	2003	5	1	TO	2003	5	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(I Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(I Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,075,000	1,233,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	69.0	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	7.1	7.3	7.4			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $ 10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Thomas McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	03	6	6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

L:\ENVIRONMENTAL\NPDES...\DESPER.DOC

SCOEPA00023710

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:024.JWC

2003-June-6

May 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the May 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this re porting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

5/31/2003

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	36,789	(100s of GALLONS)
CURRENT READING	109367	238,333	(100s of GALLONS)
CONSUMPTION	0	201,544	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	2,015,440	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	2,015,440	* 10 GAL / 7.48 GAL/CF =	2,694,439	CF
TOTAL THROUGH OVERFLOW LINE	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,694,439	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,238,420	(10s of GALLONS)
CURRENT READING	9,262,344	(10s of GALLONS)
CONSUMPTION	23,924	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	23,924	* 10 GAL / 7.48 GAL/CF=	31,984	CF

This meter reading was reported by: C. Justin Darr on 6/3/03 (date)

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023712

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **June 15, 2003**

SAMPLING PERIOD: May, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas G McCue Date: 6/6/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16) (17-19)
101128 PERMIT NUMBER
Outfall 001 DISCHARGE NUMBER

Form Approved.
OMB No. 2040-00
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	4	1	TO	2003	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	962,000	1,150,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--			totalizing recorder	
BOD	SAMPLE MEASUREMENT	33.9	40.7	lbs/day	--	4.3	5.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	18.6	24.6	lbs/day	--	2.3	3.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	60.6	69.5	lbs/day	--	7.6	8.2	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.3	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 5 DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

ER 021: JWC

Chrome batches are no longer being treated on site. pH outages: 4/1: Heavy rain, pH 6.0, 1 min 32 sec. 4/10: Fire water testing. pH 9.1, 1 min 51 sec. Continued on page 2.

SCOEPA00023714

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(3-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	4	1	TO	2003	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 5 | DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Cont from pg 1: 4/10:Fire water testing. pH 9.1, 2 min 25 sec. 4/12: Heavy rain:. pH 5.9, 13 min 21 sec.
4/25: pH probe cal'd. pH 10, 6 sec. 4/29: Heavy rain. pH 5.8, 14 min 9 sec.

SCOEPA00023715

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(1-16)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER
(17-19)	

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	4	1	TO	2003	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	142,000	236,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.3	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 5 | DAY 12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023716

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(5-16): 101128 — PERMIT NUMBER

(17-19): Outfall 003 — DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	4	1	TO	2003	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,104,000	1,339,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	66.9	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	5.8	7.5	9.1			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
503	243-2020	03	5	12

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:020.JWC

2003-May-12

April 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the April 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this re porting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **May 15, 2003**

SAMPLING PERIOD: April, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received | **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	FOXBORO	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas G. McGinn Date: 5/12/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

4/30/03

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	868,485	(100s of GALLONS)
CURRENT READING	109367	36,789	(100s of GALLONS)
CONSUMPTION	0	168,304	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,683,040	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,683,040	* 10 GAL / 7.48 GAL/CF =	2,250,053	CF
TOTAL THROUGH OVERFLOW LINE	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,250,053	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,219,505	(10s of GALLONS)
CURRENT READING	9,238,420	(10s of GALLONS)
CONSUMPTION	18,915	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	18,915	* 10 GAL / 7.48 GAL/CF=	25,287	CF

This meter reading was reported by: C. Justin Darr on 4/29/03 date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023720

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Wacker Siltronic Corporation Site ID 93450
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY LOCATION: 7200 NW Front Ave.
Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2003	3	1	TO	2003	3	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (45-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (66-69)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	912,000	996,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	26.0	32.6	lbs/day	--	3.5	4.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	17.1	31.8	lbs/day	--	2.3	3.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	57.9	72.9	lbs/day	--	7.8	8.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 4 DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER018

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-4 WHICH MAY NOT BE USED.)

SCOEPA00023721

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(3-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	3	1	TO	2003	3	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 4 DAY 3

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023722

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

101128	Outfall 002
PERMIT NUMBER (3-16)	DISCHARGE NUMBER (17-19)

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	3	1	TO	2003	3	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(4 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	132,000	216,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 4 DAY 3

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023723

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	3	1	TO	2003	3	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,044,000	1,165,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	65.1	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.3	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	03	4	3
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:017.JWC

2003-April-7

March 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the March 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **April 15, 2003**

SAMPLING PERIOD: January - March, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION		MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	No Excursions		SU		5.0 - 11.5	N/A	
TTOs (Volatiles)			mg/L		1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION		MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	< 0.001	mg/L	< 0.001	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	79.1	mg/L	1	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: Thomas C. McCann Date: 4/4/03

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **April 15, 2003**

SAMPLING PERIOD: March, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	FOXBORO	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C McCann Date: 4/4/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3/6/03 Oven Temp: 102 C Analyst: DJ

Date In: 3/6/03 Time In/Out: 1000 / 1415

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0872	0.0872	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0890	0.0883	1.4
3	CE FAB-2	500	0.0891	0.0880	2.2
				Average CE FAB-2 TSS	1.8
4	OWW	100	0.0944	0.0883	61
5	OWW	100	0.0955	0.0877	78
				Average OWW TSS	69.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2002 Revised

L:\FACLAB\WWTP\BENCH\TSSB.DOC

SCOEPA00023728

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3·13·03 Oven Temp: 105 C Analyst: DI

Date In: 3·13·03 Time In/Out: 1150 / 1415

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA		0.0873	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0885	0.0866	3.8 ✓
3	CE FAB-2	500	0.0889	0.0869	4 ✓
				Average CE FAB-2 TSS	3.9 ✓
4	OWW	100	0.0906	0.0867	39 ✓
5	OWW	100	0.0904	0.0870	34 ✓
				Average OWW TSS	36.5 ✓
				Average TSS	

Comments: _____

_____

_____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2002 Revised

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SCOEPA00023729

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3.20.03 Oven Temp: 103 C Analyst: DI

Date In: 3.20.03 Time In/Out: 1140 / 1430

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0874	0.0874	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0886	0.0882	0.8
3	CE FAB-2	500	0.0890	0.0881	1.8
				Average CE FAB-2 TSS	~~0.9~~ 1.3
4	OWW	100	0.1001	0.0869	132
5	OWW	100	0.1030	0.0877	153
				Average OWW TSS	142.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2002 Revised

SCOEPA00023730

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3.27.03 Oven Temp: 103 C Analyst: Di

Date In: 3.27.03 Time In/Out: 1130 / 1420

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0873	0.0873	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0897	0.0886	2.2 ✓
3	CE FAB-2	500	0.0895	0.0886	1.8 ✓
				Average CE FAB-2 TSS	2 ✓
4	OWW	100	0.0954	0.0886	68 ✓
5	OWW	100	0.0959	0.0891	68
				Average OWW TSS	68
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2002 Revised

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COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
227 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 NW Front Ave
Portland, Oregon
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 03-35~38
Project Name:
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additional Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: DT

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Time	Media	Analysis Requested	Test/ Profile
03-35-CE-C				3/6/03	0630	WW	BOD, Cr(T)	
03-36-CE-G				3/6/03	0630	WW	8260, 8270, 1-2 Di-Phenylhydrazine	
03-37-OWW-C				3/6/03	0630	WW	Total As,	
03-38-OWW-G				3/6/03	0630	WW	8260, IPA	

Sampled By: Dianne Luna
AUTHORIZED CUSTOMER SIGNATURE: Dianne Luna DATE: 3/6/03

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Luna	3/6/03	0900		3/6/03	1024
				LAB		

White Copy-Laboratory Yellow Copy -Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023732

Rcd - 20 Mar 2003 JJR

Report Date: March 14, 2003
Job Number: A30306AO
PO Number: 4500075102
Project No: None Provided
Project Name: 03-35-38

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 03/06/03 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A30306AO-1	03-35-CE-C	Waste Water	03/06/03	0630
A30306AO-2	03-36-CE-g	Waste Water	03/06/03	0630
A30306AO-3	03-37-OWW-C	Waste Water	03/06/03	0630
A30306AO-4	03-38-OWW-g	Waste Water	03/06/03	0630

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Technical Services

TS /atc

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023733

Analytical Data

Wacker Siltronic

Job Number: A30306AO

Lab Sample ID: A30306AO-3
Field ID: 03-37-OWW-C
Date/Time: 03/06/03 0630
Matrix: Waste Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units	Analysis Date	Analyst
Arsenic	EPA 200.8	0.001	ND	mg/L	03/11/03	CV

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SCOEPA00023734

Analytical Data

Wacker Siltronic

Job Number: A30306AO

Lab Sample ID: A30306AO-4
Field ID: 03-38-OWW-g
Date/Time: 03/06/03 0630
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/11/03
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	0.01	ND	1.5 E
Benzene	0.005	ND	ND
Bromobenzene	0.005	ND	ND
Bromochloromethane	0.005	ND	ND
Bromodichloromethane	0.005	ND	ND
Bromoform	0.005	ND	ND
Bromomethane	0.005	ND	ND
2-Butanone (MEK)	0.005	ND	ND
n-Butylbenzene	0.005	ND	ND
sec-Butylbenzene	0.005	ND	ND
tert-Butylbenzene	0.005	ND	ND
Carbon Disulfide	0.005	ND	ND
Carbon tetrachloride	0.005	ND	ND
Chlorobenzene	0.005	ND	ND
Chloroethane	0.005	ND	ND
2-Chloroethylvinyl ether	0.005	ND	ND
Chloroform	0.005	ND	ND
Chloromethane	0.005	ND	ND
2-Chlorotoluene	0.005	ND	ND
4-Chlorotoluene	0.005	ND	ND
1,2-Dibromo-3-chloropropane	0.005	ND	ND
Dibromochloromethane	0.005	ND	ND
1,2-Dibromoethane	0.005	ND	ND
Dibromomethane	0.005	ND	ND
1,2-Dichlorobenzene	0.005	ND	ND
1,3-Dichlorobenzene	0.005	ND	ND
1,4-Dichlorobenzene	0.005	ND	ND
Dichlorodifluoromethane	0.005	ND	ND
1,1-Dichloroethane	0.005	ND	ND
1,2-Dichloroethane	0.005	ND	ND

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.
E means estimated concentration.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A30306AO

Lab Sample ID: A30306AO-4
Field ID: 03-38-OWW-g
Date/Time: 03/06/03 0630
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/11/03
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	0.005	ND	ND
cis-1,2-Dichloroethene	0.005	ND	ND
trans-1,2-Dichloroethene	0.005	ND	ND
1,2-Dichloropropane	0.005	ND	ND
1,3-Dichloropropane	0.005	ND	ND
2,2-Dichloropropane	0.005	ND	ND
cis-1,3-Dichloropropene	0.005	ND	ND
trans-1,3-Dichloropropene	0.005	ND	ND
Ethylbenzene	0.005	ND	ND
Hexachlorobutadiene	0.005	ND	ND
2-Hexanone	0.005	ND	ND
Iodomethane	0.005	ND	ND
Isopropylbenzene	0.005	ND	ND
4-Isopropyltoluene	0.005	ND	ND
4-Methyl-2-pentanone	0.005	ND	ND
Methylene chloride	0.005	ND	ND
Naphthalene	0.005	ND	ND
n-Propylbenzene	0.005	ND	ND
Styrene	0.005	ND	ND
1,1,1,2-Tetrachloroethane	0.005	ND	ND
1,1,2,2-Tetrachloroethane	0.005	ND	ND
Tetrachloroethene	0.005	ND	ND
Toluene	0.005	ND	ND
1,2,3-Trichlorobenzene	0.005	ND	ND
1,2,4-Trichlorobenzene	0.005	ND	ND
1,1,1-Trichloroethane	0.005	ND	ND
1,1,2-Trichloroethane	0.005	ND	ND
Trichloroethene	0.005	ND	ND
Trichlorofluoromethane	0.005	ND	ND
1,2,3-Trichloropropane	0.005	ND	ND

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023736

Analytical Data

Wacker Siltronic

Job Number: A30306AO

Lab Sample ID: A30306AO-4
Field ID: 03-38-OWW-g
Date/Time: 03/06/03 0630
Matrix: Waste Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/11/03
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,4-Trimethylbenzene	0.005	ND	ND
1,3,5-Trimethylbenzene	0.005	ND	ND
Vinyl acetate	0.005	ND	ND
Vinyl chloride	0.005	ND	ND
m,p-Xylene	0.01	ND	ND
o-Xylene	0.005	ND	ND
4-Bromofluorobenzene (Surr.)	---	---	96%
Dibromofluoromethane (Surr.)	---	---	105%
Toluene-d8 (Surr.)	---	---	100%
1,2-Dichloroethane-d4 (Surr.)	---	---	109%

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.
Note: The sample was foaming; anti-foaming agent ws added to the sample prior to analysis.

SCOEPA00023737

Analytical Data

Wacker Siltronic

Job Number: A30306AO

Lab Sample ID: A30306AO-4
Field ID: 03-38-OWW-g
Date/Time: 03/06/03 0630
Matrix: Waste Water

EPA Category: Extractable Organics
Analysis Performed: CLISolventScan; Solvent Scan.
Analysis Date: 03/10/03
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Isopropanol	1.	ND	13.

Results expressed as mg/l unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023738

SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

3/31/03

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	695,820	(100s of GALLONS)
CURRENT READING	109367	868,485	(100s of GALLONS)
CONSUMPTION	0	172,665	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,726,650	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,726,650	* 10 GAL / 7.48 GAL/CF =	2,308,356	CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,308,356	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,194,815	(10s of GALLONS)
CURRENT READING	9,219,505	(10s of GALLONS)
CONSUMPTION	24,690	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	24,690	* 10 GAL / 7.48 GAL/CF=	33,008	CF

This meter reading was reported by: C. Justin Darr on 4/1/03.
C. Justin Darr — date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16): 101128 PERMIT NUMBER

(17-19): Outfall 001 DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	2	1	TO	2003	2	28
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (45-53) AVERAGE	QUANTITY OR LOADING (54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	QUALITY OR CONCENTRATION (46-53) AVERAGE	QUALITY OR CONCENTRATION (54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	892,000	1,094,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	21.2	22.9	lbs/day	--	3.0	3.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	9.4	12.7	lbs/day	--	1.3	1.8	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	0.01	0.03	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	52.7	56.9	lbs/day	--	7.5	8.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas C McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE

AREA CODE	NUMBER
503	243-2020

DATE

YEAR	MO	DAY
03	3	10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

ER 016

Chrome batches are no longer being treated on site.
2/11/03 pH outage, maintenance testing flow swithces on Fire Water System. pH 6.0 for 1 min 11 sec.

SCOEPA00023740

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	2	1	TO	2003	2	28
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	03	3	7
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023741

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(3-16) (17-19)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	2	1	TO	2003	2	28
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	130,000	220,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 3 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023742

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 003

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	2	1	TO	2003	2	28
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (66-69)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,022,000	1,212,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	64.5	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas G McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 3 | DAY 7

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:015.JWC

2003-March-10

February 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the February 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **March 15, 2003**

SAMPLING PERIOD: February, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas G McCue Date: 3/10/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

2/28/03

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	839,926	(100s of GALLONS)
CURRENT READING	109367	88,867	(100s of GALLONS)
CONSUMPTION	0	161,117	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,611,170	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,611,170	* 10 GAL / 7.48 GAL/CF =	2,153,971 CF
TOTAL THROUGH OVERFLOW LINE	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,153,971 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,177,044	(10s of GALLONS)
CURRENT READING	9,194,815	(10s of GALLONS)
CONSUMPTION	17,771	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	17,771	* 10 GAL / 7.48 GAL/CF=	23,758 CF

This meter reading was reported by: C. Justin Darr on 3/6/03 (date)

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023746

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. +1 503 7313
Fax +1 503 7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

July Johndohl
DMR-QA Study Coordinator
Water Quality Division

Department Of Environmental Quality
811 SW Sixth Avenue
Portland OR, 97204-1390

ER:014 JWC

Date 2003-02-28

Reference DMR-QA Study No. 22

Dear Ms Johndohl:

I have enclosed a copy of the analytical results for the Whole Effluent Toxicity testing portion of the DMRQA 22.

The results were accidently not sent.

If you have any questions, please contact Jim Claxtion

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
DMRQA Permittee Report Study DMRQA 22

cc: Tom Rothschild

DMRQA PERMITTEE REPORT
RTC Laboratory Proficiency Testing Program
Study DMRQA 22

NVLAP Lab Code: 200393-0

2931 Soldier Springs Rd. - Laramie WY 82070 - (307) 742-5452

December 15, 2002

NPDES Permit No: **OR0030589**
WACKER SILTRONIC CORPORATION
Attention: **Mr JIM CLAXTON**
7200 NW FRONT AVE
PORTLAND, OR 97210-3676

Thank you for participating in DMRQA 22 Whole Effluent Toxicity Portion. If you have any additional questions about your report, please contact Chris Rucinski at (307) 742-5452 or e-mail: reports@rt-corp.com.

This report shall not be reproduced except in full, without written approval of the laboratory. In no way may a laboratory claim endorsement by NVLAP, NIST or any other federal agency. RTC is accreditied by NVLAP to preform PT programs for the scope of accreditation under NVLAP Lab Code 200393-0.

EPA Lab Code: OR00011
Coffey Laboratories, Inc.
Portland, OR 97230

Analyte	Analyte No.	Method	Reported Value	Assigned Value	Acceptance Limits	Evaluation
Fathead Minnow Acute MHSF 25° - LC50	754	13	**39.23**	44.9	20.0 to 69.8	Acceptable
Ceriodaphnia Chronic MHSF - Survival NOEC	766	21	**12.5**	25.0	12.5 to 50.0	Acceptable

Authorized for Release by: _____ **Date:** 12/15/2002

SCOEPA00023748

ER: 011

PERMITTEE NAME/ADDRESS (Include Facility Name if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(5-11) 101128 PERMIT NUMBER
(17-18) Outfall 001 DISCHARGE NUMBER

MONITORING PERIOD
FROM YEAR 2003 MO 1 DAY 1 (19-21) (22-23) (24-25)
TO YEAR 2003 MO 1 DAY 31 (26-27) (28-29) (30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	883,000	1,035,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	21.1	27.1	lbs/day	--	3.0	4.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	7.9	12.5	lbs/day	--	1.1	1.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.01	0.02	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	49.1	60.8	lbs/day	--	7.0	8.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 2 DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being done on site.

SCOEPA00023749

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	1	1	TO	2003	1	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	MAXIMUM (54-61)	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	MAXIMUM (54-61)	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 2 | DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023750

[redacted] NAME/ADDRESS (Include if different)
[redacted] Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER	DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	1	1	TO	2003	1	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
MV-3 Flow	SAMPLE MEASUREMENT	136,000	343,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1001 AND 33 USC 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 2 | DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023751

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Wacker Siltronic Corporation Site ID 93450
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY: 7200 NW Front Ave.
LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(5-16) (17-19)

101128	Outfall 003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2003	1	1	TO	2003	1	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,020,000	1,367,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	66.6	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	03	2	10
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

[redacted] (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM [redacted] WHICH MAY NOT BE USED.) PAGE 4 OF 4

L:\ENVIRONMENTAL\NPDES\NPDESPER.DOC

SCOEPA00023752

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:010.JWC

2003-Feb-11

By-Pass of Hydrozyclone to OWW during Valve Replacement

Dear Mr. Dean,

February 10, 2003 at 6:45 am, Wacker began diverting treated CAD from CAD stage 2 to the City. This diversion was required to replace a bottom valve on the Hydrozyclone in the Wacker WasteWater Treatment Plant. You gave Tom McCue verbal approval to perform the diversion provided that Wacker limit the duration of the by-pass and report estimated by-pass volumes and measures implemented to mitigate the effect of the by-pass on the next monthly discharge report.

The diversion lasted for about 85 minutes from 6:45 am to 8:10 am February 10, 2003. The maximum rate of flow of the diverted waste during this period was approximately 20 GPM. Using 20 GPM as the flow rate, then the maximum quantity of waste diverted was 1700 gallons. During the diversion, samples were pulled and the pH and fluoride concentration measured. The pH of the samples was within permit limits. There is not a permit limit for fluoride. The fluo ride data is provided for your information. The following chart lists the measurements:

Sample Time	7:20 am	7:50 am	8:30 am	Average
pH	9.1	9.5	9.2	9.3
Fluoride (ppm)	8.3	15.8	5.2	9.8

The following steps were taken to mitigate the effect of the by-pass:

1. The CAD and CAED tanks were pumped down as much as possible before starting the repair.

2. The CAED transfer pumps were shut off to limit the fluoride concentration in the waste steam during the entire by-pass time

3. The volume of CAD wastewater was limited by changing the level control set point to use the entire capacity of the CAD forwarding tanks.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue

Environmental Manager

cc: Tom Rothschild, Justin Darr, POTW-IDR File

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. (503) 219-7313
Fax (503) 219-7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:009.JWC

2003-Feb-11

January 2003 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the January 2003 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **February 15, 2003**

SAMPLING PERIOD: January, 2003

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas M McCue Date: 2/12/03

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\03 C pH SMR.dot

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

January-03

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2		
PAST READING	109367	355,523	(100s of GALLONS)	
CURRENT READING	109367	534,703	(100s of GALLONS)	
CONSUMPTION	0	179,180	(100s of GALLONS)	
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)	
TOTAL CONSUMPTION	1,791,800	(10s of GALLONS)		

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,791,800	* 10 GAL / 7.48 GAL/CF =	2,395,455	CF
TOTAL THRU' OVERFLOW LINE	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,395,455	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,145,187	(10s of GALLONS)
CURRENT READING	9,177,044	(10s of GALLONS)
CONSUMPTION	31,857	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	31,857	* 10 GAL / 7.48 GAL/CF=	42,590	CF

This meter reading was reported by: C. Justin Darr on 2/6/03.
C. Justin Darr — date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023756

WACKER
Wacker Siltronic Corporation

Department of Environmental Quality
Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201-5884

February 11, 2003 ER008:MB

Subject: 2002 Air Emissions Report
ACDP No. 26-3002

Enclosed are one original and two copies of the Annual Report for Wacker Siltronic Corporation required under our Air Contaminant Discharge Permit (ACDP). The Report of Excess Emissions is included in the body of the Annual Report.

No upset condition incidents were reported to DEQ in 2002.

We estimated 2002 emissions using AP-42 emission factors, natural gas usage (for boilers) and hours of operation (for generators).

If you have any questions, please call Myron Burr at 503-219-7832.

Very truly yours,

WACKER SILTRONIC COPRORATION

Thomas C. McCue
Environmental Manager

Cc;
2002 Air Report file
2003 Correspondence file

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

Wacker Siltronic Corporation
Annual Report for 2002
ACDP No. 26-3002

13a. Quantity of natural gas and diesel oil burned on an annual basis, and resulting criteria pollutant annual emissions:

Natural gas burned: 177.65 million cubic feet

Diesel burned: 459 gallons

Resulting criteria pollutant annual emissions:

Particulate	0.27 tons
CO	3.13 tons
NOx	12.53 tons
SOx	0.06 tons
VOC	0.52 tons

13b. Annual wafer manufacturing NOx emissions:

NOx	7.26 tons

13c. The amount of VOCs emitted on an annual basis:

VOCs	17.44 tons

(includes VOCs from fuel burning and unrecovered VOCs from chemicals used)

13d. The amount of VOC cleaning solvent emitted each month:

January	1.37 tons
February	0.91 tons
March	1.22 tons
April	1.66 tons
May	1.32 tons
June	1.20 tons
July	0.88 tons
August	1.60 tons
September	0.78 tons
October	0.62 tons
November	1.19 tons
December	0.53 tons

Wacker Siltronic Corporation
Annual Report for 2002
ACDP No. 26-3002

13e. The amount of VOC used and amount of VOC waste collected on annual basis:

VOC used	20.94 tons
VOC waste collected	4.03 tons

13f. Emergency diesel generator total hours of operation:

15 hours

13g. Log of all planned and unplanned excess emissions in accordance with OAR 340-28-1440:

None.

13h. List all major maintenance performed on air pollution equipment:

1/14/02 Set air-fuel mixture on Boiler 3.
2/8/02 Repaired feedwater problem on Boiler 6.
9/23/02 Fab2 Hazardous Process Materials (HPM) scrubber demister pads replaced during fab shut-down.
9/26/02 Fab 1 Epi scrubber demister pads replaced.
Epi operations were shut down during this operation.

WACKER
Wacker Siltronic Corporation

January 14, 2003

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER004:JC

Dear Dr. Zais,

The second Bioassay of Wacker's effluent **passes the requirements** of our NPDES permit number 101128.

CH2MHill results for December 2002

Acute (48-hour) Results:	Survival (% Effluent)	
	Ceriodaphnia dubia	Pimephales promelas
NOEC	30%	30%
ZID Pass Criteria[1]	≥13.4%	≥13.4%
Chronic Results:	**Survival (% Effluent)**	
	Ceriodaphnia dubia	Pimephales promelas
NOEC	7.5%	30%
Mixing Zone Pass Criteria[1]	≥ 1.8%	≥ 1.8%

The first bioassay test did not pass the permit requirements. A QC failure at CH2MHill Biomonitoring Services required that the waste steam be resampled December 8, 2002. The test results were received January 13, 2003.

If you have any questions, please contact Jim Claxton at 503-219-7313.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
NPDES DMR File

[1] CH2MHILL. Mixing Zone Effluent Dilution Evaluations prepared for Wacker Siltronic Corporation in 1994, 1995 and 1996. The NPDES discharge permit defines, for Wacker's effluent discharge to the Willamette River, a zone of initial dilution (ZID) having a 5-foot radius from the point of discharge at Outfall 003, and a mixing zone having a 50-foot radius from the point of discharge at Outfall 003. The mixing zone dilution studies identified worst-case (0.1 feet/ second as current velocity) dilutions at distances of 5 and 50 feet from the discharge point of 7.5:1 and 55.5:1 ($Q_{Total}/Q_{Effluent}$) respectively. These dilutions are equivalent to 13.4% effluent at the edge of the ZID and 1.8% effluent at the edge of the mixing zone. According to the discharge permit, the effluent is considered to be acutely toxic if an acute test No-Observable-Effects-Concentration (NOEC) is less than 13.4% effluent, and is considered to be chronically toxic if a chronic test NOEC is less than 1.8% effluent. Conversely, the effluent is considered to be in compliance for toxicity if the acute test NOEC≥ 13.4% effluent and the chronic test NOEC ≥ 1.8% effluent.

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023760

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME [redacted] Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE [redacted] NITORING REPORT (DMR)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	12	1	TO	2002	12	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Process Waste Water Flow	SAMPLE MEASUREMENT	813,000	1,125,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	27.7	37.6	lbs/day	--	3.8	4.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	7.5	11.9	lbs/day	--	1.0	1.4	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	64.6	74.2	lbs/day	--	9.2	10.8	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 03 MO 1 DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being done on site.

ER: 002 JWC

SCOEPA00023761

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(3-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	12	1	TO	2002	12	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 03 | MO 1 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023762

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME W[illegible]r Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-1[illegible])	(17-19)
101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

FROM YEAR	MO	DAY	TO YEAR	MO	DAY
2002	12	1	2002	12	31
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	137,000	280,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Thomas C McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	03	1	8
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023763

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation Site ID 93450

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2002	12	1	TO	2002	12	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	950,000	1,242,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	68.0	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.2	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	TELEPHONE NUMBER	DATE YEAR	DATE MO	DATE DAY
503	243-2020	03	1	8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

L:\ENVIRONMENTAL\NPDE[illegible]\NPDESPER.DOC

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. +1 503 7313
Fax +1 503 7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:001.JWC

2003-Jan-10

December 2002 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the December 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: January 15 2003

SAMPLING PERIOD: October - December, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received | Date Entered

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
December 2002	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	No excursions	SU		5.0 - 11.5	N/A	
TTOs (Volatiles)	EPA 8760/8270	<0.05 mg/L	0.05	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	<0.05 mg/L	0.05	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	66 mg/L	1.0	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

FOR WACKER SILTRONIC CORP.:

Signature: Thomas C McCue Date: 1/10/03

Thomas C. McCue, Manager, Environmental Engineering

SCOEPA00023766

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: January 15, 2003

SAMPLING PERIOD: December, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR WACKER SILTRONIC CORP.:

Signature: Thomas C. McCue Date: 1/10/03

Thomas C. McCue, Manager, Environmental Engineering

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 12-26-02 Oven Temp: 105 C Analyst: DJ

Date In: 12-26-02 Time In/Out: 1020 / 1420

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0875	0.0875	0
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
2	CE FAB-2	500	0.0879	0.0875	0.8
3	CE FAB-2	500	0.0882	0.0879	0.6
				Average CE FAB-2 TSS	0.7
4	OWW	200	0.0954	0.0884	35
5	OWW	200	0.0979	0.0878	50.5
				Average OWW TSS	42.8
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2002 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 12-19-02 Oven Temp: 150 C Analyst: Di

Date In: 12-19-02 Time In/Out: 1000 / 1100

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0876	0.0876	
	CE FAB-1				
	CE FAB-1				
				Average CE FAB-1 TSS	
20	CE FAB-2	500	0.0876	0.0870	1.2
3	CE FAB-2	500	0.0874	0.0869	1.0
				Average CE FAB-2 TSS	1.1
4	OWW	100	0.0904	0.0867	37
5	OWW	100	0.0901	0.0873	28
				Average OWW TSS	32.5
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2002 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 12Dec2002 Oven Temp: 104 C Analyst: TJR

Date In: 12Dec2002 Time In/Out: 1003 /

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0881	0.0886	
—	CE FAB-1	~~200~~			—
—	CE FAB-1	~~200~~			—
				Average CE FAB-1 TSS	—
2	CE FAB-2	200	0.0870	0.0869	0.5
3	CE FAB-2	200	0.0868	0.0866	1.0
				Average CE FAB-2 TSS	0.75
4	OWW	100	0.0954	0.0871	83
5	OWW	100	0.0955	0.0874	81
				Average OWW TSS	82
				Average TSS	

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2002 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 12-5-02 Oven Temp: 103 C Analyst: DJ

Date In: 12-5-02 Time In/Out: 1100 / 1415

Tin #	Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1	Blank	NA	0.0885	0.0885	0
	CE FAB-1				
	CE FAB-1				
	Average CE FAB-1 TSS				
2	CE FAB-2	500	0.0874	0.0866 ~~0.0885~~	1.6
3	CE FAB-2	500	0.0885	0.0879	1.2
	Average CE FAB-2 TSS				1.4
4	OWW	100	0.0977	0.0876	101
5	OWW	100	0.1001	0.0888	113
	Average OWW TSS				107
	Average TSS				

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, g - Tare Wt, g) X 1,000,000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEI 12 Nov 2002 Revised

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SCOEPA00023771

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: ~~4500075101~~ 02-165-169
Project Name:
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: DI

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ___ of ___
Job Number:
Custabbr: ☐NE
☐ VISA ☐ M/G Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Collection Time	Media	Analysis Requested	Test/ Profile
02-165-CE-C				12/5/02	0620		BOD, Cr(T) (218.2), Total Phosphate	
02-166-CE-g					0620		8260, 8270, 1-2 Diphenylhydrazine	
02-167-OWW-g					0620		AS (Total)	
02-168-OWW-g					0620		IPA, 8260, 8270 1-2 Diphenylhydrazine	
02-169-MV-3-g					0720		Total Phosphate	

Sampled By: Dianne Irish
AUTHORIZED CUSTOMER SIGNATURE Dianne Irish DATE: 12-5-02

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
IPA - Detect - 1.0 ppm	Dianne Irish	12-5-02	0950	[signature]	12/5/02	0950
				LAB		

Write Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

SCOEPA00023772

Analytical Data

Wacker Siltronic

Job Number: A21205BT

Lab Sample ID: A21205BT-4
Field ID: 02-168-OWW-q
Date/Time: 12/05/02 0620
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 12/07/02
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	1600.
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	ND
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	ND
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023773

Analytical Data

Wacker Siltronic

Job Number: A21205BT

Lab Sample ID: A21205BT-4
Field ID: 02-168-OWW-q
Date/Time: 12/05/02 0620
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 12/07/02
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	ND
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND
1,2,3-Trichloropropane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023774

Analytical Data

Wacker Siltronic

Job Number: A21205BT
Page Number: 13 of 18

Lab Sample ID: A21205BT-4
Field ID: 02-168-OWW-q
Date/Time: 12/05/02 0620
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 12/07/02
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
4-Bromofluorobenzene (Surr.)	---	---	79%
Dibromofluoromethane (Surr.)	---	---	127%
Toluene-d8 (Surr.)	---	---	107%
1,2-Dichloroethane-d4 (Surr.)	---	---	138%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A21205BT

Lab Sample ID: A21205BT-3
Field ID: 02-167-OWW-C
Date/Time: 12/05/02 0620
Matrix: Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Arsenic	EPA 200.8	0.05	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023776

Analytical Data

Wacker Siltronic

Job Number: A21205BT

Lab Sample ID: A21205BT-4
Field ID: 02-168-OWW-q
Date/Time: 12/05/02 0620
Matrix: Water

EPA Category: Extractable Organics
Analysis Performed: EPA 8270; Semivolatile Organics by GC/MS.
Analysis Date: 12/12/02
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acenaphthene	0.03	ND	ND
Acenaphthylene	0.03	ND	ND
Aldrin	0.03	ND	ND
Anthracene	0.03	ND	ND
Azobenzene	0.03	ND	ND
1,2-Diphenylhydrazine	0.03	ND	ND
Benzidine	0.04	ND	ND
Benzo(a)anthracene	0.03	ND	ND
Benzo(a)pyrene	0.05	ND	ND
Benzo(b)fluoranthene	0.05	ND	ND
Benzo(g,h,i)perylene	0.05	ND	ND
Benzo(k)fluoranthene	0.05	ND	ND
beta-BHC	0.03	ND	ND
delta-BHC	0.03	ND	ND
bis(2-Chloroethoxy)methane	0.03	ND	ND
bis(2-Chloroethyl)ether	0.03	ND	ND
bis(2-Chloroisopropyl)ether	0.03	ND	1.9
Bis(2-ethylhexyl)phthalate	0.05	ND	ND
4-Bromophenyl phenyl ether	0.03	ND	ND
Butyl benzyl phthalate	0.03	ND	ND
4-Chloro-3-methylphenol	0.03	ND	ND
2-Chloronaphthalene	0.03	ND	ND
2-Chlorophenol	0.03	ND	ND
4-Chlorophenyl phenyl ether	0.03	ND	ND
Chrysene	0.03	ND	ND
4,4-DDD	0.03	ND	ND
4,4-DDE	0.03	ND	ND
4,4-DDT	0.03	ND	ND
Di-n-butylphthalate	0.05	ND	ND
Di-n-octylphthalate	0.05	ND	ND

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023777

Analytical Data

Wacker Siltronic

Job Number: A21205BT

Lab Sample ID: A21205BT-4
Field ID: 02-168-OWW-q
Date/Time: 12/05/02 0620
Matrix: Water

EPA Category: Extractable Organics
Analysis Performed: EPA 8270; Semivolatile Organics by GC/MS.
Analysis Date: 12/12/02
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Dibenzo(a,h)anthracene	0.05	ND	ND
1,2-Dichlorobenzene	0.03	ND	ND
1,4-Dichlorobenzene	0.03	ND	ND
1,3-Dichlorobenzene	0.03	ND	ND
3,3-Dichlorobenzidine	0.04	ND	ND
2,4-Dichlorophenol	0.03	ND	ND
Dieldrin	0.03	ND	ND
Diethyl phthalate	0.03	ND	ND
2,4-Dimethylphenol	0.03	ND	ND
Dimethylphthalate	0.03	ND	ND
2,4-Dinitrophenol	0.03	ND	ND
2,4-Dinitrotoluene	0.03	ND	ND
2,6-Dinitrotoluene	0.03	ND	ND
Endosulfan sulfate	0.03	ND	ND
Endrin Aldehyde	0.03	ND	ND
Fluoranthene	0.03	ND	ND
Fluorene	0.03	ND	ND
Heptachlor	0.03	ND	ND
Heptachlor epoxide	0.03	ND	ND
Hexachlorobenzene	0.03	ND	ND
Hexachlorobutadiene	0.03	ND	ND
Hexachloroethane	0.03	ND	ND
Indeno(1,2,3-cd)pyrene	0.05	ND	ND
Isophorone	0.03	ND	ND
2-Methyl-4,6-dinitrophenol	0.03	ND	ND
N-Nitrosodi-n-propylamine	0.03	ND	ND
Naphthalene	0.03	ND	ND
Nitrobenzene	0.03	ND	ND
4-Nitrophenol	0.03	ND	ND
2-Nitrophenol	0.03	ND	ND

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023778

Analytical Data

Wacker Siltronic

Job Number: A21205BT

Lab Sample ID: A21205BT-4
Field ID: 02-168-OWW-q
Date/Time: 12/05/02 0620
Matrix: Water

EPA Category: Extractable Organics
Analysis Performed: EPA 8270; Semivolatile Organics by GC/MS.
Analysis Date: 12/12/02
Analyst: AB

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Pentachlorophenol	0.03	ND	ND
Phenanthrene	0.03	ND	ND
Phenol	0.03	ND	ND
Pyrene	0.03	ND	ND
1,2,4-Trichlorobenzene	0.03	ND	ND
2,4,6-Trichlorophenol	0.03	ND	ND
2-Fluorobiphenyl (Surr.)	---	---	64%
2-Fluorophenol (Surr.)	---	---	31%
Nitrobenzene-d5 (Surr.)	---	---	68%
Phenol-d6 (Surr.)	---	---	24%
Terphenyl-d14 (Surr.)	---	---	72%
2,4,6-Tribromophenol (Surr.)	---	---	92%

Results expressed as mg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

SCOEPA00023779

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

12/31/02

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	200,608	(100s of GALLONS)
CURRENT READING	109367	355,523	(100s of GALLONS)
CONSUMPTION	0	154,915	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,549,150	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,549,150	* 10 GAL / 7.48 GAL/CF =	2,071,056 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,071,056 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,091,657	(10s of GALLONS)
CURRENT READING	9,145,187	(10s of GALLONS)
CONSUMPTION	53,530	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	53,530	* 10 GAL / 7.48 GAL/CF=	71,564 CF

This meter reading was reported by: C. Justin Darr on 1/9/03 (date)

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023780

ER: 055 MB

WACKER SILTRONIC

PERFECT SILICON SOLUTIONS

MYRON BURR, PE
ENVIRONMENTAL ENGINEER
ENVIRONMENTAL ENGINEERING

Wacker Siltronic Corporation
7200 NW Front Avenue, MS 30
Portland OR 97210-3676, USA
Tel. +1 503 219-7832
Fax +1 503 219-7599
myron_burr@siltronic.com

2002-Dec-12

Sharon Quast
TPS Technologies, Inc.
9333 N. Harborgate Street
Portland, OR 97203

SUBJECT: Profile Re-Certification for: North Sump Sludge; Silicon Solids Sludge; Storm Drain Sludge; and, Filter Press Cake

Dear Sharon:

Enclosed are the final analytical test results for the recycled waste streams referenced above, which are submitted for profile and re-certification.

If you have any questions please do not hesitate to call me.

Sincerely,

Myron Burr, PE
Environmental Engineer

MB:tjw

Enclosures

tpsltr.doc

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. +1 503 7313
Fax +1 503 7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

ER:053.JWC

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

Date 2002-Dec-13

Reference August 2002 Bioassay Update

Dear Dr. Zais,

This letter is to inform you that Wacker Siltronic Corporation **did not passed** the Bioassay as required by our NPDES permit number 101128. A complete Bioassay re-test is scheduled for the week of Dec 8, 2002 and the results will be submitted by as soon as possible.

The following table shows the time line of events for this year's bioassay:

Sample Date	Test result	Comments
Week of Aug 5	Test aborted	Due to a miss communication between Coffey Labs and Wacker, the wrong sample dilutions were used for the analysis so the test was aborted.
Week of Aug 26	QC problems no results	Control organisms did not meet the QC requirements of the analysis, no test results. Test re-scheduled
Week of Oct 7	**Samples Failed** Re-test scheduled for the week of Nov. 3.	Testing could not be re-scheduled until the week of Oct 7. There were a number of reasons for this (see letter dated Sept 10, 2002) but briefly: 1. Neither CH2M-Hill nor Coffey labs could re-schedule the test until the week of Sept 23. 2. Wacker scheduled a partial-manufacturing shutdown to perform plant maintenance from Sept 22 to October 1, so any sampling during this week would not represent the entire waste steam.
Week of Nov 3	QC problems no results	Wacker contacted CH2M-Hill Dec 2 to check on results. Wacker was told that the test would need to be repeated because the control organisms did not meet the QC requirements of the analysis. Test re-scheduled.
Week of Dec 8	In process	The earliest a re-test that could be scheduled was the week of Dec 8. The samples will be analyzed by CH2M-Hill.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
Bioassay 2002 File

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation Site ID 93450

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	11	1	TO	2002	11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	957,000	1,037,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	32.8	42.4	lbs/day	--	4.0	5.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	24.4	25.7	lbs/day	--	3.0	3.2	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	0.02	lbs/day	--	<0.01	<0.01	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	65.7	69.5	lbs/day	--	8.2	8.7	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 USC § 1001 AND 33 USC § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	02	12	11
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being done on site.

ER: 052

SCOEPA00023783

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	11	1	TO	2002	~~10~~ 11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Date corrected JWC 12/11/02

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 12 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023784

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16) (17-19)
101128 PERMIT NUMBER
Outfall 002 DISCHARGE NUMBER

MONITORING PERIOD
FROM YEAR 2002 MO 11 DAY 1 (20-21) (22-23) (24-25)
TO YEAR 2002 MO 11 DAY 30 (26-27) (28-29) (30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	QUANTITY OR LOADING (54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	QUALITY OR CONCENTRATION (46-53) AVERAGE	QUALITY OR CONCENTRATION (54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	126,000	216,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE
AREA CODE 503 NUMBER 243-2020

DATE
YEAR 02 MO 12 DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023785

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation Site ID 93450
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2002	11	1	TO	2002	11	30

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (45-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-65)	FREQUENCY OF ANALYSIS (66-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,083,000	1,236,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	69.1	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 per violation, maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 12 | DAY 11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

L:\ENVIRONMENTAL\NPDES\NPDESPER.DOC

SCOEPA00023786

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. +1 503 7313
Fax +1 503 7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

ER:052.JWC

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

Date 2002-Dec-12

Reference November 2002 DMR Report : BOD Analysis

Dear Dr. Zais,

The BOD sample taken for the week of November 27, 2002 was not correctly labeled by Wacker and was not analyzed by our laboratory within the 48 hour holding time. The error was not discovered until the following week, Dec 2,2002. We ask our laboratory to perform the BOD assay on the balance of the expired sample. That result is included in the monthly report.

The individual BOD results for the month are:

Sample Date	ppm	lbs.
Nov 7	4.0 ppm	32.1 lbs
Nov 14	5.0 ppm	41.7 lbs
Nov 21	2.0 ppm	14.9 lbs
Nov 27	5.0 ppm	42.4 lbs

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. +1 503 7313
Fax +1 503 7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:051.JWC

2002-Dec-10

November 2002 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the November 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **December 15, 2002**

SAMPLING PERIOD: November, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR WACKER SILTRONIC CORP.:

Signature: Thomas C McCue Date: 12/11/02

Thomas C. McCue, Manager, Environmental Engineering

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

11/30/02

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	7,985	(100s of GALLONS)
CURRENT READING	109367	200,608	(100s of GALLONS)
CONSUMPTION	0	192,623	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,926,230	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,926,230	* 10 GAL / 7.48 GAL/CF =	2,575,174	CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,575,174	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	9,025,388	(10s of GALLONS)
CURRENT READING	9,091,657	(10s of GALLONS)
CONSUMPTION	66,269	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	66,269	* 10 GAL / 7.48 GAL/CF=	88,595	CF

This meter reading was reported by: C. Justin Darr on 12/10/02 (date)

Sent to:
Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452
6543 N Burlington Avenue
Portland, Oregon 97203-5452

SCOEPA00023790

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. +1 503 7313
Fax +1 503 7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:049.JWC

2002-Nov-8

October 2002 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the October 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **November 15, 2002**

SAMPLING PERIOD: October, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR WACKER SILTRONIC CORP.:

Signature: Thomas C. McCann Date: November 12, 2002

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot

SCOEPA00023792

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

10/31/01

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	288,671	(100s of GALLONS)
CURRENT READING	109367	460,864	(100s of GALLONS)
CONSUMPTION	0	172,193	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,721,930	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,721,930	* 10 GAL / 7.48 GAL/CF =	2,302,045 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,302,045 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	8,938,633	(10s of GALLONS)
CURRENT READING	9,025,388	(10s of GALLONS)
CONSUMPTION	86,755	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	86,755	* 10 GAL / 7.48 GAL/CF=	115,983 CF

This meter reading was reported by: C. Justin Darr on 11/5/02
C. Justin Darr date

Sent to:
Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452
6543 N Burlington Avenue
Portland, Oregon 97203-5452

SCOEPA00023793

WACKER
Wacker Siltronic Corporation

November 8, 2002

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

ER047:JC

Dear Dr. Zais,

Below are the results of the annual bioassay test performed October 8 through October 15, 2002 as required in our NPDES permit number 101128. **The results of the bioassay do not comply with the conditions of our permit.** A second Bioassay is scheduled for November with sampling dates of November 4, 6 and 8.

Coffey Labs results for October 2002

Acute (48-hour) Results:	Survival (% Effluent)	
	Ceriodaphnia dubia	Pimephales promelas
NOEC	15%	7.5%
ZID Pass Criteria[1]	≥13.4%	≥13.4%
Chronic Results:	**Survival (% Effluent)**	
	Ceriodaphnia dubia	Pimephales promelas
NOEC	30%	<1.9%
Mixing Zone Pass Criteria[1]	≥ 1.8%	≥ 1.8%

If you have any questions, please contact Jim Claxton at 503-219-7313.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
NPDES DMR File

[1] CH2MHILL. Mixing Zone Effluent Dilution Evaluations prepared for Wacker Siltronic Corporation in 1994, 1995 and 1996. The NPDES discharge permit defines, for Wacker's effluent discharge to the Willamette River, a zone of initial dilution (ZID) having a 5-foot radius from the point of discharge at Outfall 003, and a mixing zone having a 50-foot radius from the point of discharge at Outfall 003. The mixing zone dilution studies identified worst-case (0.1 feet/ second as current velocity) dilutions at distances of 5 and 50 feet from the discharge point of 7.5:1 and 55.5:1 ($Q_{Total}/Q_{Effluent}$) respectively. These dilutions are equivalent to 13.4% effluent at the edge of the ZID and 1.8% effluent at the edge of the mixing zone. According to the discharge permit, the effluent is considered to be acutely toxic if an acute test LC_{50} is less than 13.4% effluent, and is considered to be chronically toxic if a chronic test LC_{50} is less than 1.8% effluent. Conversely, the effluent is considered to be in compliance for toxicity if the acute test $LC_{50} \geq$ 13.4% effluent and the chronic test $LC_{50} \geq$ 1.8% effluent.

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023794

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. +1 503 7313
Fax +1 503 7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:043.JWC

2002-Oct-9

September 2002 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the September 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **October 15, 2002**

SAMPLING PERIOD: July - September, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
September 2002	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	No Excursions	SU		5.0 - 11.5	N/A	
TTOs (Volatiles)		mg/L		1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	< 0.05 mg/L	0.05	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	64.5 mg/L	1.0	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

FOR WACKER SILTRONIC CORPORATION:

Signature: Thomas C McCue Date: 10/10/02

Thomas C. McCue, Environmental Manager

SCOEPA00023796

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **October 15, 2002**

SAMPLING PERIOD: September, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR WACKER SILTRONIC CORPORATION:

Signature: Thomas C McCue Date: 10/10/02

Thomas C. McCue, Environmental Manager

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

9/30/01

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	82,965	(100s of GALLONS)
CURRENT READING	109367	288,671	(100s of GALLONS)
CONSUMPTION	0	205,706	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	2,057,060	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	2,057,060	* 10 GAL / 7.48 GAL/CF =	2,750,080 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,750,080 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	8,867,200	(10s of GALLONS)
CURRENT READING	8,938,633	(10s of GALLONS)
CONSUMPTION	71,433	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	71,433	* 10 GAL / 7.48 GAL/CF=	95,499 CF

This meter reading was reported by: C. Justin Darr on 10/7/02
C. Justin Darr — date

Sent to:
Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452
6543 N Burlington Avenue
Portland, Oregon 97203-5452

SCOEPA00023798

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(3-16) 101128 PERMIT NUMBER
(17-19) Outfall 001 DISCHARGE NUMBER

MONITORING PERIOD
FROM YEAR (20-21) 2002 MO (22-23) 9 DAY (24-25) 1
TO YEAR (26-27) 2002 MO (28-29) 9 DAY (30-31) 30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	884,000	1,051,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--			Ionizing recorder	
BOD	SAMPLE MEASUREMENT	31.4	46.1	lbs/day	--	4.3	6.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	11.8	16.7	lbs/day	--	1.6	2.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	61.9	67.6	lbs/day	--	8.5	8.9	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas G McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020
DATE: YEAR 02 MO 10 DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER042

SCOEPA00023799

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(3-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	9	1	TO	2002	9	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	02	10	8
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023800

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER
(3-11)	(12-19)

MONITORING PERIOD

FROM YEAR	MO	DAY	TO YEAR	MO	DAY
2002	9	1	2002	9	30
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	122,000	223,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 10 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023801

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-16) PERMIT NUMBER: 101128
(17-19) DISCHARGE NUMBER: Outfall 003

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	9	1	TO	2002	9	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,006,000	1,274,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	70.9	°F		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 10 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023802

Report Date: September 10, 2002
Job Number: A20826J
PO Number: 4500075102
Project No: None Provided
Project Name: Bioassay - August 2002

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 08/26/02 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A20826J-1	02-110	Waste Water	08/26/02	0750
A20826J-2	02-111	Waste Water	08/28/02	0735
A20826J-3	02-112	Waste Water	08/30/02	0725

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for the chemical analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch. The tests for the Acute 96 hour Fathead Minnow and the 48 hour Ceriadaphnia EPA 6004-90-027 were run, but the control organisms died and the test was invalid. Another test could not be started immediately because the cause of death of the control organisms needed to be resolved before another test could be performed. The test is rescheduled for October 7, 2002.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Technical Services

TS /atc

SCOEPA00023803

August

Aug 5

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. +1 503 7313
Fax +1 503 7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

ER:039.JWC

Dr. Elliot Zais
Water Quality Source Control
Department of Environmental Quality Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

Date 2002-Sept-10

Reference August 2002 Bioassay Results

Dear Dr. Zais,

This letter is to inform you that Wacker Siltronic Corporation will not be submitting annual bioassay results by September 15, 2002, as discussed with you last week and as required by our NPDES permit number 101128.

Bioassay samples are normally taken during the first week of August. Samples were taken the week of August 5. Due to a miss communication between Coffey Laboratories and Wacker Siltronic, the wrong dilution factors were used in preparing the test samples. The test was aborted. The test was re-scheduled and samples were taken the week of August 26, 2002. During the performance of the bioassay, the control organisms died and the test was aborted. Please refer to the attached letter from Coffey Laboratories.

Coffey Laboratories is investigating the cause of the deaths of the control organisms. However, due to the investigation Coffey Laboratories has closed their bioassay department until they have completed a series of Quality Control tests to re-certify this area for use. Coffey Laboratories is confident that the re-certification process will be completed by the week of September 23, 2002. CH2M-Hill was contacted but their bioassay schedule is also filled until the week of September 23, 2002.

Beginning September 22 Wacker Siltronic has scheduled a partial-manufacturing shutdown to perform maintenance until October 1. Bioassay samples taken during this period would not be representative of the normal Wacker Siltronic effluent. The bioassay is re-scheduled for the week of October 7,2002. Bioassay results will be submitted by November 15, 2002. If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
Bioassay 2002 File

PERMITTEE NAME/ADDRESS (Include Facility Name/Location/Different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-00
Approval expires 10-31-94

MONITORING PERIOD

FROM YEAR	MO	DAY	TO YEAR	MO	DAY
2002	8	1	2002	8	31
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste	SAMPLE MEASUREMENT	961,000	1,030,000	gal/day	--	--	--	--		Continuous	
Water Flow	PERMIT REQUIREMENT	--	--		--	--	--			totalizing recorder	
BOD	SAMPLE MEASUREMENT	44.0	61.4	lbs/day	--	5.5	8.0	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	14.3	19.3	lbs/day	--	1.8	2.3	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	61.6	64.3	lbs/day	--	7.6	7.9	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/ 7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	NUMBER	DATE YEAR	MO	DAY
503	243-2020	02	9	9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being done on site.

ER 038 JWC

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-48 WHICH MAY NOT BE USED.)

SCOEPA00023806

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) 101128 PERMIT NUMBER

(17-19) Outfall 003 DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	8	1	TO	2002	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(3 Card Only) QUANTITY OR LOADING (54-61) MAXIMUM	(3 Card Only) QUANTITY OR LOADING UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(4 Card Only) QUALITY OR CONCENTRATION (46-53) AVERAGE	(4 Card Only) QUALITY OR CONCENTRATION (54-61) MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,104,000	1,251,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	70.5	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1 ✓	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes are certain fines up to $10,000 and certain imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 9 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023807

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	8	1	TO	2002	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

Thomas A. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 9 | DAY 9

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023808

PERMITTEE NAME/ADDRESS (Include Facility Name/Location/Different)

NAME Wac[illegible] Siltronic Corporation

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	8	1	TO	2002	8	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	143,000	282,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

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Wacker Siltronic Corp. by:

[signature]

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
503	243-2020	02	9	9
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023809

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. +1 503 7313
Fax +1 503 7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:037.JWC

Date 2002-Sept-10

Reference August 2002 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the August 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

Enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **September 15, 2002**

SAMPLING PERIOD: August, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR: WACKER SILTRONIC CORP.:

Signature: Thomas C McCue Date: 9/16/02

Thomas C. McCue, Environmental Engineering Manager

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

8/31/01

1. OWW DISCHARGE

ACTUAL READINGS

	Fab. 1	FAB 2		
PAST READING	109367	890,830	(100s of GALLONS)	
CURRENT READING	109367	82,965	(100s of GALLONS)	
CONSUMPTION	0	192,135	(100s of GALLONS)	
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)	
TOTAL CONSUMPTION	1,921,350	(10s of GALLONS)		

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,921,350	* 10 GAL / 7.48 GAL/CF =	2,568,650	CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,568,650	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	8,787,067	(10s of GALLONS)
CURRENT READING	8,867,200	(10s of GALLONS)
CONSUMPTION	80,133	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	80,133	* 10 GAL / 7.48 GAL/CF=	107,130	CF

This meter reading was reported by: C. Justin Darr on 9/10/02
C. Justin Darr — date

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023812

WACKER
Wacker Siltronic Corporation

October 25, 2002

ER:036 TM

Ms. Cory Ann Chang
Air Quality Division
Oregon Department of Environmental Quality
811 S.W. 6th Avenue
Portland, Oregon 97204

Re: Application for Renewal of ACDP 26-3002, Wacker Siltronic Corporation, Portland, Oregon (Application Number 018238): Update

Dear Ms Chang:

Thank you for taking the time to meet with us recently to discuss our air permit renewal application. Per our conversation, this letter contains information to update our renewal application submitted June 30, 2002.

As we discussed, Wacker is studying the feasibility of building a 300 mm fab in Portland. While the first of Wacker's 300 mm fabs will be built in Germany, we would like to include the major components of a 300 mm fab in this air permit renewal to facilitate the siting of a follow-on fab in Portland. Much of the following information relates to this possible expansion.

Additional Proposed Low-NO_x Boiler

In addition to the one new 21 MMBtu Low-NOX boiler identified in the original renewal application (to replace two older 10.5 MMBtu/hr boilers currently on site), Wacker will need one more 21 MMBtu Low-NO_x boiler for the 300 mm expansion. Again, this boiler would be fired solely on natural gas. Wacker intends to include this new boiler as part of this permit renewal to meet notice to construct requirements. The emissions that would result from this additional boiler have been accounted for in the updated potential to emit estimates presented in this application for renewal.

Additional Proposed Emergency Generator

In addition to the one new 1000 kw emergency generator identified in the original renewal application, Wacker will need one additional 1000kw generator for the 300 mm expansion to power essential support systems in the event of an emergency. This would bring the total of the emergency generators operated on-site to five (1-400 kw unit, and 4-1000 kw units). Per our conversation, we are not including the emissions from these generators in the potential to emit estimates since the generators are intended for emergency use only. In addition, a review of our records has established that the emergency generators were not included in the original baseline. Therefore, the potential to emit estimates have been revised accordingly. Finally, we propose this submittal as notice of construction for these new generators.

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023813

300 mm Expansion Scrubbers

In general, the 300 mm expansion will be similar to the 200 mm expansion that Wacker built in the mid-1990's. The acidic, caustic and emergency emissions will be controlled by a dedicated Hazardous Process Materials (HPM) scrubber with a removal efficiency of at least 99 percent. In addition, there will be the following dedicated scrubbers:

Process Equipment	Number of Scrubbers
7 epitaxial reactors	14
2 annealing furnaces	2
Trichlorosilane saturator	2

We do not expect any net increase in VOC emissions due to successful past pollution prevention efforts.

The NOx emissions will be controlled by the existing NOx scrubber for the site because it has enough excess capacity to handle the NOx emissions from this expansion.

If additional emissions devices are identified as planning for the expansion progresses, Wacker will prepare and submit construction notices for these devices and modify the permit if necessary.

Air Toxics Data

Per your request, attached are estimates of Wacker's hydrofluoric acid and hydrochloric acid emissions. These were prepared for Wacker's 2001 SARA 313 Report.

Updated PSEL Increase Requests

Due to the equipment additions referenced above and the changes included with the original renewal application, Wacker is requesting minor increases to the current PSEL assigned to the facility in the ACDP. Changes requested are less than significant emission increases over the original baseline. A summary of the proposed increases is attached.

SUMMARY

We appreciate your assistance on this permit renewal and encourage you to contact us if you need any additional information. We look forward to working with you on this permit renewal and are available to meet to further discuss our requests or the submitted materials. Please do not hesitate to contact me if you have any questions or comments.

Yours truly,

Thomas C. McCue
Environmental Manager

c: Myron Burr, Wacker

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

SCOEPA00023814

Stack Emissions (Section 5.2)

It has been assumed in past years that 1% of the acids stored in tanks and baths [used] went to the scrubbers as a vapor/mist. Scrubber manufacturers report 99% removal efficiency of acid vapor/mist. **The stack emissions are calculated by lbs used X .01 aerosol X .01 fugitive/lb aerosol**

All of the stack emission estimates are based on best engineering judgement (basis of estimate code = O).

Hydrogen Fluoride

One percent of the HF used is assumed to become a vapor/mist. HF emissions from HF bulk storage tanks are scrubbed. The HPM scrubber that receives the Fab 2 bulk storage tank (and process) emissions is assumed to have a removal efficiency of 99%. Fab 1 bulk storage tank emissions and process emissions are scrubbed by Acid Etch and Final Cleaning scrubbers which are assumed to have a removal efficiency of 99%.

lbs HF used	aerosol	fugitive	**lbs HF stack emissions**
156,478	0.01	0.01	**16**

Hydrogen Chloride Aerosol

An average of 10% (6 lbs/60 lb cyl.) of the HCl(g) in each gas cylinder is returned to the supplier as heel residue which is reclaimed. The scrubbers that treat the vapor/mist from baths have removal efficiencies of 99% per scrubber manufacturers. The scrubbers that treat the gaseous HCl and HCl from the reaction of trichlorosilane are assumed to have removal efficiencies of 99%, though their manufacturers report efficiencies of 99.999%. **Total HCl Stack Emissions = ([HCl aerosol purchased X 0.90 lbs/lb of gas] + [(HCl used for baths & UPW) X 0.01lbs/HCl used] + [HCl aerosol mfged from TCS]) X (scrubber efficiency)**

lbs HCl aerosol purchased EPI less 10% heel return	163,458
lbs HCl aerosol from baths	381
lbs HCl aerosol mfged from TCS	189,204
total lbs aerosol	353,043
lbs HCl Stack Emissions	**3,530**

Fugitive Emissions (Section 5.1)

Fugitive emissions include (1) equipment leaks from valves, pump seals, flanges, compressors, sampling connections, open-ended lines, etc.; (2) evaporative losses from surface impoundment's (or open top tanks) and spills; (3) releases from building ventilation systems; and (4) any other fugitive or non-point air emissions (see page 31 of EPA 745-K-99-001). We use an engineering estimate that **0.1% of each acid used will be released as fugitive emissions. Fugitive emissions are calculated by multiplying the reportable annual quantity of each acid by 0.001.** All of the fugitive emission estimates are based on best engineering judgement (basis of estimate code = O).

Hydrogen Fluoride

lbs of HF used (from HF Usage)	lbs HF Emissions
156,478	**156**

Hydrogen Chloride Aerosol

Fugitive emissions of HCl(g) from the epitaxy processes are assumed to be zero because of the stringent design and operation requirements. The only fugitive emissions for HCl will be from the HCl(aerosol).

lbs HCl(aerosol) manufactured	lbs HCl Emissions
189,585	**190**

Air Permit Renewal
Wacker Siltronic Corporation
PSEL and SER Review Table

SER Review	**NOx**	**VOC**	**SO2**	**PM10**	**CO**
	ton/year	ton/year	ton/year	ton/year	ton/year
Baseline	44.4	15.2	36.8	3.2	6.3
Requested PSEL 7/5/00 (t/yr)	83.94	53.40	1.90	8.25	28.74
less generators	-11.00	-0.33	-1.10	-0.24	-2.41
add 1 boiler	7.428	0.257	0.055	1.256	5.594
Requested PSEL 10/25/02 (t/yr)	80.37	53.33	0.85	9.27	31.92
Delta (Requested PSEL - baseline)	35.97	38.13	-35.95	6.07	25.62
SER	40	40	40	25	100

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Inter-Laboratory Split Comparison

DEQ Case Number: _____

Source Name: Wacker Siltronic Corporation
Contact Person: Thomas J. Rothschild
Address: 7200 NW Front Avenue Portland, OR 97210
Collected By: Thomas J. Rothschild

Sample Date: 23-July 2002
Phone: 503-243-2020

Region/Division: _____

ER035 JWC

Analysis ♠ (1)	FIELD MEASUREMENTS♣			SOURCE SAMPLE RESULTS					DEQ LAB RESULTS				
	Sample A	Sample B	Sample C	Sample A	Sample B	Sample C	Sample D	Date/Time Analysis set up	Sample A	Sample B	Sample C	Sample D	Date/Time Analysis set up
BOD				4 mg/L				23 Jul 2002 ~1300					
TSS				1.9 mg/L				23 Jul 2002 ~1000					
F⁻				8.2 mg/L				23 Jul 2002 ~1100					
Total $PO_4^{\equiv}$				0.1 mg/L				23 Jul 2002 ~1000					
Cr Total				<0.001 mg/L				23 Jul 2002 ~1300					

Sample	Sample point description ♠ (ie. Effluent comp.).	Container number	
		SOURCE	DEQ ♠
A		Combined Effluent	
B		—	
C		—	
D		—	

Fill in your split sample results and mail to:

DEQ Lab
1712 SW 11th Ave.
Portland, OR 97201
Attn: QA Chemist

Shaded area for DEQ use.
♣DEQ sampler enter your field measurements, if taken; indicate whether they are estimates.
♠DEQ sampler is responsible for completing this column.

Need assistance with this form? Contact the QA chemist at (503) 229-5983.

(1) Analyses Parameters filled in by Wacker Siltronic Corporation Facilities Chemist. JJR

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Wacker Siltronic Corporation
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY: 7200 NW Front Ave.
LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	7	1	TO	2002	7	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (45-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	942,000	1,107,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	37.4	55.2	lbs/day	--	4.8	6.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	18.1	24.3	lbs/day	--	2.3	2.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	0.02	0.04	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	61.4	67.1	lbs/day	--	7.9	8.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020
DATE: YEAR 02 | MO 8 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER034 SWC

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-49 WHICH MAY NOT BE USED.)

SCOEPA00023819

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	7	1	TO	2002	7	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 8 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023820

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER	DISCHARGE NUMBER
101128	Outfall 002

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	7	1	TO	2002	7	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
MV-3 Flow	SAMPLE MEASUREMENT	120,000	353,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1001 AND 33 USC 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas C McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020
DATE: YEAR 02 | MO 8 | DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023821

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128
(17-19) DISCHARGE NUMBER: Outfall 003

MONITORING PERIOD
FROM YEAR (20-21) 2002 MO (22-23) 7 DAY (24-25) 1
TO YEAR (26-27) 2002 MO (28-29) 7 DAY (30-31) 31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,062,000	1,221,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	70.9	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.0	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020
DATE: YEAR 02 MO 8 DAY 8

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023822

WACKER SILTRONIC

JIM CLAXTON
ENVIRONMENTAL ENGINEER

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland OR 97210-3676, USA
Tel. 503-219-7313
Fax 503-219-7599
jim_claxton@siltronic.com

Wacker Siltronic Corporation
7200 NW Front Avenue, Portland OR 97210-3676, USA

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

ER:033 JWC

Date 2002-Aug-9

Reference July 2002 Industrial Discharge Report

Dear Mr. Dean,

Enclosed is the July 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton.

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
Industrial Discharge Report
Special Account Meter Report

cc: Tom Rothschild
POTW-IDR File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **August 15, 2002**

SAMPLING PERIOD: July, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

~~Instructions:~~ ~~Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge~~ of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR WACKER SILTRONIC CORP.:

Signature: Thomas C McCann Date: 8/9/02

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot

SCOEPA00023824

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) 101128 PERMIT NUMBER

(17-19) Outfall 001 DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	6	1	TO	2002	6	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	1,024,000	1,144,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	70.7	86.0	lbs/day	--	8.5	10.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	33.8	74.2	lbs/day	--	4.1	9.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	0.03	0.09	lbs/day	--	<0.01	0.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	60.3	67.4	lbs/day	--	7.3	8.3	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.3	0.4	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1001 AND 33 USC 1319 (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 02 MO 7 DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
Chrome batches are no longer being treated on site.

ER027

SCOEPA00023825

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER (3-16)	DISCHARGE NUMBER (17-19)
101128	Outfall 001

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2002	6	1	TO	2002	6	30

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 NUMBER 243-2020

DATE: YEAR 02 MO 7 DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023826

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME: Wacker Siltronic Corporation
ADDRESS: PO Box 83180
Portland, OR 97283-0810
FACILITY: 7200 NW Front Ave.
LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)
(2-16)

101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER
(3-10)	(11-19)

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	6	1	TO	2002	6	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	124,000	272,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		TELEPHONE		DATE		
Tom McCue Environmental Manager	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years.)	Wacker Siltronic Corp. by: Thomas C. McCue SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE: 503	NUMBER: 243-2020	YEAR: 02	MO: 7	DAY: 11
TYPED OR PRINTED						

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023827

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2002	6	1	TO	2002	6	30

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

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PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,111,000	1,353,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	70.1	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 7 | DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

L:\ENVIRONMENTAL\NPDES\NPDESPER.DOC

SCOEPA00023828

WACKER
Wacker Siltronic Corporation

July 11, 2002 ER:026 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the June 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **July 15, 2002**

SAMPLING PERIOD: April - June, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
June 2002	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	No excursions	SU		5.0 - 11.5	N/A	
TTOs (Volatiles)	EPA 8260	< 0.01 mg/L	0.01	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	< 0.05 mg/L	0.05	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.8	310 mg/L	1.0	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

FOR WACKER SILTRONIC CORP.:

Signature: Thomas C McCue Date: 7/11/02

Thomas C. McCue, Manager of Environmental Engineering

SCOEPA00023830

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **July 15, 2002**

SAMPLING PERIOD: June, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR WACKER SILTRONIC CORP.:

Signature: Thomas C. McCue Date: 7/11/02

Thomas C. McCue, Manager of Environmental Engineering

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot

4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

6/30/00

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	498,568	(100s of GALLONS)
CURRENT READING	109367	678,364	(100s of GALLONS)
CONSUMPTION	0	179,796	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,797,960	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,797,960	* 10 GAL / 7.48 GAL/CF =	2,403,690	CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0	CF
TOTAL CONSUMPTION			2,403,690	CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	8,627,053	(10s of GALLONS)
CURRENT READING	8,702,656	(10s of GALLONS)
CONSUMPTION	75,603	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	75,603	* 10 GAL / 7.48 GAL/CF=	101,074	CF

This meter reading was reported by: C. Justin Darr on 7/10/02 (date)

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023832

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number: 02-68-71
Project Name:
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additional Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: DJ

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbrt: ☐ NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC#: #:
Billing Codes: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date / Time		Media	Analysis Requested	Test/ Profile
02-68-CE-Composite				6-12-02	0620		BOD, $Cr^{(T)}$, TSS, F^-	
02-69-CE-grab				6-12-02	0620		8260, 8270 1-2 Diphenylhydrazine	
02-70-OWW-Composite				6-12-02	0620		Total As + TSS	
02-71-OWW-grab				6-12-02	0620		8260, IPA	

Sampled By: Dianne L. Rush
AUTHORIZED CUSTOMER SIGNATURE: Dianne L. Rush DATE:

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
Cr(T): Detection of 0.001ppm	Dianne L. Rush	6/12/02	0831	DJ	6/12/02	1000
IPA: Detection of 1.0ppm				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

Analytical Data

Wacker Siltronic

Job Number: A20612Z

Lab Sample ID: A20612Z-3
Field ID: 02-70-OWW-Composite
Date/Time: 06/12/02 0620
Matrix: Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Suspended Solids	EPA 160.2	1.	310.	mg/L
Arsenic	EPA 200.8	0.05	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

p.10
Jul 10 02 09:04a
SCOEPA00023834

Analytical Data

Wacker Siltronic

Job Number: A20612Z

Lab Sample ID: A20612Z-4
Field ID: 02-71-OWW-Grab
Date/Time: 06/12/02 0620
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/21/02
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	2500.
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	ND
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	ND
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as μg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Analytical Data

Wacker Siltronic

Job Number: A20612Z
Page Number: 11 of 13

Lab Sample ID: A20612Z-4
Field ID: 02-71-OWW-Grab
Date/Time: 06/12/02 0620
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/21/02
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
1,1-Dichloropropene	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	ND
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND

Results expressed as μg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Analytical Data

Wacker Siltronic

Job Number: A20612Z
Page Number: 12 of 13

Lab Sample ID: A20612Z-4
Field ID: 02-71-OWW-Grab
Date/Time: 06/12/02 0620
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 06/21/02
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	5.	ND	ND
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
4-Bromofluorobenzene (Surr.)	---	---	96%
Dibromofluoromethane (Surr.)	---	---	128%
Toluene-d8 (Surr.)	---	---	109%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

WACKER
Wacker Siltronic Corporation

June 25, 2002 ER024:JWC

Industrial Stormwater City of Portland
Industrial Stormwater Program
Department of Environmental Quality
6543 N Burlington Avenue
Portland, Oregon 97203-5452

RE: Annual Storm water monitoring data for July 1, 2001 to June 30, 2002

Dear Industrial Stormwater

Enclosed is the storm water monitoring data as required by Wacker Siltronic's NPDES Storm Water Discharge Permit number 1200-Z issued on December 23, 1997. Sampling was conducted October 23, 2001 and May 13, 2002 meeting the requirement of conducting two monitoring events per sample point between July 1, 2001 and June 30, 2002.

Enclosed are copies of the monitoring results (including lab report and chain of custody). All results are well below the benchmark guideline concentrations.

If you have any questions, please contact Jim Claxton at 503-219-7313.

Sincerely,

WACKER SILTRONIC CORPORATION

Thomas C. McCue

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
Department of Environmental Quality
SW Report 2002 File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

Bureau of Environmental Services

Industrial Source Control Division

INDUSTRIAL STORMWATER

NPDES 1200-Z MONITORING REPORT

Industry Name: Wacker Siltronic Corp.

Site Address: 7200 NW Front Avenue, Portland, OR 97210-3676

The permittee shall monitor stormwater **twice** per year for the parameters outlined in their NPDES 1200-Z Stormwater Discharge Permit Schedule B.1.a., and submit results to the City as stated in Schedule D.2.

Stormwater samples were taken for the above permittee, on these days and at these sample points:

Sample Date(s)	Sample Point(s)
10/23/01	North, East & South
5/13/02	North, East & South

The permittee shall submit by **July 15** of each year a copy of the **laboratory analysis reports**, which show analytical methods and detection limits, for stormwater samples collected for the previous monitoring year (July 1-June 30).

☐ **Monitoring Waiver Reduction Notification**:
Check the box if your facility is exercising a waiver of monitoring based on meeting benchmarks listed in Schedule A.9., AND site conditions have not changed to impact stormwater run-off. Note: This does not exclude your facility from notifying DEQ about the waiver of monitoring. Please read Schedule B of the permit to clearly understand the monitor waiver reduction guidelines. If waiver request is for select pollutants, list the parameters excluded from monitoring: _____.

☐ **No Exposure Certification**:
Check the box if your facility is required to have a NPDES 1200-Z permit, but monitoring is not required due to no exposure of stormwater to industrial activities. This no exposure certification is outlined in Schedule B.3.b, and the facility meets the requirements of Schedule B.1.e. Note: This does not exclude your facility from notifying DEQ.

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

Signature: Thomas C McCue

Title: Thomas C. McCue, Environmental Manager

Date: 6/25/02

SCOEPA00023839

Stormwater Report Summary
2001/2002
(covering the sampling period from July 1, 2001 to June 30, 2002)

Total Copper mg/l	**10/23/01**	**5/13/02**
North	<0.03	0.07
South	<0.003	0.05
East	<0.03	<.03
Benchmark & Sample Date	0.1	0.1

Total Lead mg/l	**10/23/01**	**5/13/02**
North	<0.001	0.005
South	<0.001	0.005
East	<0.001	<.005
Benchmark & Sample Date	0.4	0.4

Total Zinc mg/l	**10/23/01**	**5/13/02**
North	0.16	0.48
South	0.18	0.49
East	0.35	0.31
Benchmark & Sample Date	0.6	0.6

pH S.U.	**10/23/01**	**5/13/02**
North	6.47	6.12
South	6.77	6.30
East	6.76	6.42
Lower Benchmark & Sample Date	5.5	5.5
Upper Benchmark & Sample Date	9.0	9.0

TSS mg/l	**10/23/01**	**5/13/02**
North	6.88	29.3
South	3.88	32.5
East	3.5	14.5
Benchmark & Sample Date	130	130

Oil and Grease mg/l	**10/23/01**	**5/13/02**
North	<3.0	<3.0
South	<3.0	<3.0
East	<3.0	<3.0
Benchmark & Sample Date	10	10

SCOEPA00023840

RECEIVED NOV 19 2001

Report Date: November 13, 2001
Job Number: A11025Q
PO Number: 4500075102
Project No: None Provided
Project Name: Stormwater - Fall - 2001

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 10/25/01 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A11025Q-1	01-116 Stormwater - North	Storm Water	10/23/01	0920
A11025Q-2	01-117 Stormwater - East	Storm Water	10/23/01	0945
A11025Q-3	01-118 Stormwater - South	Storm Water	10/23/01	0925

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Linda Bay

Technical Services

TS /atc

SCOEPA00023841

Analytical Data

Wacker Siltronic

Job Number: A11025Q
Page Number: 2 of 4

Lab Sample ID: A11025Q-1
Field ID: 01-116 NORTH
Date/Time: 10/23/01 0920
Matrix: Storm Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.16	mg/L
Lead	EPA 239.2	0.001	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023842

Analytical Data

Wacker Siltronic

Job Number: A11025Q
Page Number: 3 of 4

Lab Sample ID: A11025Q-2
Field ID: 01-117 East
Date/Time: 10/23/01 0945
Matrix: Storm Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.35	mg/L
Lead	EPA 239.2	0.001	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023843

Analytical Data

Wacker Siltronic

Job Number: A11025Q
Page Number: 4 of 4

Lab Sample ID: A11025Q-3
Field ID: 01-118 South
Date/Time: 10/23/01 0925
Matrix: Storm Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.18	mg/L
Lead	EPA 239.2	0.001	ND	mg/L
Lead	EPA 239.2	0.001	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: South (Wox) Sample ID#: # 01-118

Date: 10-23-01 Time: 0925 Sampled by: Tom Roths child
Justin Durr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 22.1 F-, mg/L: 5.81 pH: 6.77

TSS, mg/L: 3.88 Nitrate, mg/L: 272.8

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3 (1)

Metals(EPA 200.8), mg/L:

Copper: < 0.03 (1) Lead: < 0.001 (1) Zinc: 0.18 (1)

Notes:
(1) Coffey Laboratories; WSC# 01-118.

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 10.23.01 Oven Temp: 104 C Analyst: DJ

Date In: 10.23.01 Time In/Out: 1055 / 1414

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0921	0.0921	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
6. #01-118	400	0.0937 ~~0.0941~~	0.0920	4.25
7. #01-118	400	0.0942	0.0928	3.5
		Average TSS		3.88

Comments: Storm water South.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

[redacted]

Standard Methods for the Examination of Water and stewater, 1998, 20th Edition, Section 2540 D, ge 2-57.
NPDES Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023846

BENCHSHEET

NITRATE ANALYSIS

Test Date: 10-23-01 Sample Date: 10-23-01 Analyst: DI

Data:

Sample	Nitrate Nitrogen(N)	x Dilution	x 4.4* =	Nitrate, mg/L
#01-118	12.4	x 1:5	x 4.4 =	272.8
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: LR131

Sample:	#01-118		
After Spike Concentration:	13.2 mg/L	mg/L	mg/L
Recovery:	80 %	%	%

Comments: Stormwater sample South

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

\\WSC-CLUSTER1_RADATA1_SERVER\RADATA1\GROUP\FACLAB\WWTP\BENCH\NITRATE4000B.DOC

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 10.23.01 Sample Date: 10.23.01 Analyst: DJ

COD Reactor Temperature: 150 C

Time In / Out: 1005 / 1205 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: 298 mg/L (Range: 28 - 32 mg/L)
4. ~~CE (composite)~~ #01-118 (22.1): 650 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Storm water sample South.

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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SCOEPA00023848

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 10.23.01 Sample Date: 10.23.01 Analyst: DI

Slope: -59.3 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1012 Date Opened: 9/20/01

10.0 mg/L: Lot #: A1078 Date Opened: 9/20/01

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
#01-118	5.81

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#01-118
After Spike Concentration:	____ mg/L	____ mg/L	7.95 mg/L
Recovery:	____ %	____ %	107 %

Comments: Storm water south

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 JAN 2000 Revised

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SCOEPA00023849

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: North Outfall Sample ID#: 01-116

Date: 10-23-01 Time: 0920 Sampled by: ~~Dan~~ Tom Rothschild
Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 6.5 F-, mg/L: 0.147 pH: 6.47

TSS, mg/L: 6.88 Nitrate, mg/L: 3.08

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3 (1)

Metals(EPA 200.8), mg/L:

Copper: <0.03 (1) Lead: <0.001 (1) Zinc: 0.16 (1)

Notes:
Coffey Laboratories; WSC # 01-116

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 10-23-01 Oven Temp: 104 C Analyst: DI

Date In: 10-23-01 Time In/Out: 1055 / 1414

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0921	0.0921	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
2 8. #01-116	400	0.0941	0.0915	6.5
3 8. #01-116	400	0.0951	0.0922	7.25
		Average TSS		6.88

Comments: Storm Water North #01-116

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, Page 2-57.
PDES Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023851

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 10.23.01 Sample Date: 10-23-01 Analyst: _____

COD Reactor Temperature: 150 C

Time In / Out: 1005 / 1205 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.

2. Zero the DR/4000 with an RODI H_2O blank.

3. Check the 30mg/L standard: _____mg/L (Range: 28 - 32 mg/L)

4. ~~CE~~ #01-116 (composite): 6.5 mg/L.

5. OWW (composite): Direct DR/4000 reading: _____mg/L

(Dilution: ____ ml in ____ ml RODI H_2O)

X ____ (Dilution Factor) = _____mg/L

Comments: Stormwater North- #01-116

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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SCOEPA00023852

BENCHSHEET

NITRATE ANALYSIS

Test Date: 10-23-01 Sample Date: 10-23-01 Analyst: DI

Data:

Sample	Nitrate Nitrogen (N)		Dilution		4.4* =	Nitrate, mg/L
#01-116	0.7	x	N/A	x 4.4 =		3.08
		x		x 4.4 =		
		x		x 4.4 =		
		x		x 4.4 =		

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: 48131

Sample:	#01-116		
After Spike Concentration:	1.5 mg/L	mg/L	mg/L
Recovery:	80 %	%	%

Comments: Storm Water North #01-116

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

\\WSC-CLUSTER1_RADATA1_SERVER\RADATA1\GROUP\FACLAB\WWTP\BENCH\NITRATE4000B.DOC

SCOEPA00023853

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 10-23-01 Sample Date: 10-23-01 Analyst: DL

Slope: -59.3 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1012 Date Opened: 9/20/01

10.0 mg/L: Lot #: A1078 Date Opened: 9/20/01

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
#01-116	0.147

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#01-116
After Spike Concentration:	____ mg/L	____ mg/L	1.91 mg/L
Recovery:	____ %	____ %	88.2 %

Comments: Stormwater North #01-116

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 JAN 2000 Revised

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SCOEPA00023854

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: East (Riverbank) Sample ID#: 01.117

Date: 10.23.01 Time: ~~0920~~ 0945 Sampled by: Tom Rothschild Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 8.3 F-, mg/L: 0.196 pH: 6.76

TSS, mg/L: 3.5 Nitrate, mg/L: 1.76

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3 (1)

Metals(EPA 200.8), mg/L:

Copper: <0.03 (1) Lead: <0.001 (1) Zinc: 0.35 (1)

Notes:
(1) Coffey Laboratories; WSC #0117

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 10-23-01 Oven Temp: 104 C Analyst: DF

Date In: 10-23-01 Time In/Out: 1055 / 1414

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0921	0.0921	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
4B. 01-117	400	0.0932	0.0917	3.75
5B. 01-117	400	0.0953	0.0940	3.25
		Average TSS		3.5

Comments: Stormwater East

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: [illegible]rmit: monthly avg. 23 mg/L, daily max. 61 mg/L.

R[illegible]ırd Methods for the Examination of Water and
ıter, 1998, 20th Edition, Section 2540 D,
-57.
S Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 10.23.01 Sample Date: 10.23.01 Analyst: DI

COD Reactor Temperature: 150 C

Time In / Out: 1005 / 1205 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: _____mg/L (Range: 28 - 32 mg/L)
4. ~~CE~~ #01.117 (~~composite~~): 8.3 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Stormwater #01-117.

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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SCOEPA00023857

BENCHSHEET

NITRATE ANALYSIS

Test Date: 10·23·01 Sample Date: 10·23·01 Analyst: DI

Data:

Sample	Nitrate Nitrogen (N)		Dilution		4.4*		Nitrate, mg/L
#01.117	0.4	x	N/R	x	4.4	=	1.76
		x		x	4.4	=	
		x		x	4.4	=	
		x		x	4.4	=	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: 48131

Sample:	#01.117		
After Spike Concentration:	1.4 mg/L	mg/L	mg/L
Recovery:	100 %	%	%

Comments: Stormwater East.

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

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BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 10.23-01 Sample Date: 10.23.01 Analyst: DJ

Slope: -59.3 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1012 Date Opened: 9.20.01

10.0 mg/L: Lot #: A1028 Date Opened: 9.20.01

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
#01.117	0.196

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#01.117
After Spike Concentration:	____ mg/L	____ mg/L	2.18 mg/L
Recovery:	____ %	____ %	99.2 %

Comments: Storm water sample East.

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 JAN 2000 Revised

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SCOEPA00023859

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Or.
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: Stormwater - Fall - 2001
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: DR

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Time	Media	Analysis Requested	Test/ Profile
01-116				10.23.01	0920		oil+grease-EPA·1664 Copper, Lead, Zinc-EPA·200.8	
01·117				10.23.01	0945		Oil+grease EPA·1664 Copper, Lead, Zinc-EPA·200.8	
01-118				10.23.01	0925		Oil+grease-EPA-1664 Copper, Lead, Zinc-EPA·200.8	

Sampled By: Dr Tom Rothschild, Gary Kent
AUTHORIZED CUSTOMER SIGNATURE: Dianne Lust DATE: 10.25.01

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Lust	10.25.01	0900	DLZ	10/25	1055
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

Report Date: 06/03/2002
Job Number: A20515AQ
PWSID:
PO Number: 45000751002
Project No.: 02-39-41
Project Name: Spring Stormwater 2002

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210

Sample Information

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A20515AQ-1	02-39 North	Storm Water	05/13/2002	1345
A20515AQ-2	02-40 East	Storm Water	05/13/2002	1415
A20515AQ-3	02-41 South	Storm Water	05/13/2002	1400

Analytical results are on the following page(s).

Sincerely,

Technical Services

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

TS/atc

SCOEPA00023861

Sample Identification

Lab Sample ID#: A20515AQ-1 02-39 North

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	0.07 mg/L	EPA 200.7	0.03 mg/L	CV
Lead	0.005 mg/L	EPA 239.2	0.005 mg/L	CFS
Total Oil & Grease	ND mg/L	EPA 1664A	3. mg/L	BAB
Zinc	0.48 mg/L	EPA 200.7	0.05 mg/L	CV

ND means none detected at or above the detection limit listed.

6/3/02

Sample Identification

Lab Sample ID#: A20515AQ-2 02-40 East

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	ND mg/L	EPA 200.7	0.03 mg/L	CV
Lead	ND mg/L	EPA 239.2	0.005 mg/L	CFS
Total Oil & Grease	ND mg/L	EPA 1664A	3. mg/L	BAB
Zinc	0.31 mg/L	EPA 200.7	0.05 mg/L	CV

ND means none detected at or above the detection limit listed.

SCOEPA00023863

Sample Identification

Lab Sample ID#: A20515AQ-3 02-41 South

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	0.05 mg/L	EPA 200.7	0.03 mg/L	CV
Lead	0.005 mg/L	EPA 239.2	0.005 mg/L	CFS
Total Oil & Grease	ND mg/L	EPA 1664A	3. mg/L	BAB
Zinc	0.49 mg/L	EPA 200.7	0.05 mg/L	CV

ND means none detected at or above the detection limit listed.

6/3/02

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: North (river) Sample ID#: 02.39

Date: 5.13.02 Time: 1345 Sampled by: Tom Roths child
Justin Derr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 414 F-, mg/L: 0.240 pH: 6.12

TSS, mg/L: 29.25 Nitrate, mg/L: 1.74

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3.0

Metals(EPA 200.8), mg/L:

Copper: 0.07 Lead: 0.005 Zinc: 0.48

Notes:

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5/13/02 Oven Temp: 105 C Analyst: D.

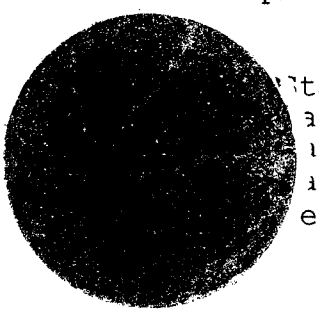
Date In: 5/14/02 Time In/Out: 0830 / 1430

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0888	0.0888	
2. CE FAB-1	200			
3. CE FAB-1	200			
			Average CE FAB-1 TSS	
4. CE FAB-2				
5. CE FAB-2				
			Average CE FAB-2 TSS	
6. OWW	50			
7. OWW	50			
			Average OWW TSS	
2 8. 02-39	200	0.0932	0.0873	29.5
39. 02-39	200	0.0942	0.0884	29
			Average TSS	29.25

Comments: Storm Water North.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.



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astewater, 1998, 20th Edition, Section 2540 D,
ıge 2-57.
ıtional Pollution Discharge Elimination System
ermit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023866

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 5.13.02 Sample Date: 5.13.02 Analyst: DJ

Slope: -59.6 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1242 Date Opened: 5/9/02

10.0 mg/L: Lot #: A1198 Date Opened: 5/9/02

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	0
02.39	0.240

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: Ricca
Lot Number: 1106406

	CE FAB-1	CE FAB-2	02.39
After Spike Concentration:	____ mg/L	0 mg/L	2.20 mg/L
Recovery:	____ %	____ %	98 %

Comments: Storm Water North -

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023867

BENCHSHEET

NITRATE ANALYSIS

Test Date: 5-13-02 Sample Date: 5-13-02 Analyst: D

Data:

Sample	Nitrate Nitrogen (N)		Dilution		4.4*		Nitrate, mg/L
#02-39	0.4	x	N/A	x	4.4	=	1.76
		x		x	4.4	=	
		x		x	4.4	=	
		x		x	4.4	=	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

Sample:	02-39		
After Spike Concentration:	1.3 mg/L	mg/L	mg/L
Recovery:	90 %	%	%

Comments: Storm Water North

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

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SCOEPA00023868

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 5/13/02 Sample Date: 5-13-02 Analyst: Di

COD Reactor Temperature: 150 C

Time In / Out: 1430 / 1630 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.

2. Zero the DR/4000 with an RODI H_2O blank.

3. Check the 30mg/L standard: 30.0 mg/L (Range: 28 - 32 mg/L)
02·39 grab
4. ~~CE (composite)~~: 41.4 mg/L.

5. OWW (composite): Direct DR/4000 reading: _____mg/L

(Dilution: ____ ml in ____ ml RODI H_2O)

X ____ (Dilution Factor) = _____mg/L

Comments: Storm Water North

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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SCOEPA00023869

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: East (river) Sample ID#: 02-40

Date: 5/13/02 Time: 1415 Sampled by: Tom Rothschilel
Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:___ No: X Floating Solids: yes:___ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 44.7 F-, mg/L: 0.194 pH: 6.42

TSS, mg/L: 14.5 Nitrate, mg/L: 0

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3.0

Metals(EPA 200.8), mg/L:

Copper: <0.03 Lead: <0.005 Zinc: 0.31

Notes:

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5-13-02 Oven Temp: 105 C Analyst: DI

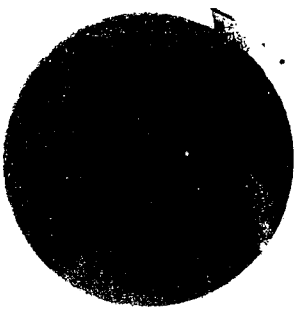
Date In: 5-14-02 Time In/Out: 0830 / 1430

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0888	0.0888	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
48. 02-40	200	0.0896	0.0867	14.5
59. 02-40	200	0.0903	0.0874	14.5
		Average TSS		14.5

Comments: Storm Water East.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.



. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023871

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 5-13-02 Sample Date: 5-13-02 Analyst: Di

Slope: -59.6 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1242 Date Opened: 5/9/02

10.0 mg/L: Lot #: A1198 Date Opened: 5/9/02

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
02410	0.174

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#02-40
After Spike Concentration:	____ mg/L	____ mg/L	2.04 mg/L
Recovery:	____ %	____ %	93.3 %

Comments: Storm Water East.

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023872

BENCHSHEET

NITRATE ANALYSIS

Test Date: 5-13-02 Sample Date: 5-13-02 Analyst: _____

Data:

Sample	Nitrate Nitrogen (N)	x Dilution	x 4.4* =	Nitrate, mg/L
#02-40	0.0	x N/A	x 4.4 =	0
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

	Sample: #02-40		
After Spike Concentration:	0.9 mg/L	_____ mg/L	_____ mg/L
Recovery:	90%	_____ %	_____ %

Comments: Storm Water East -

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

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SCOEPA00023873

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 5/13/02 Sample Date: 5/13/02 Analyst: DV

COD Reactor Temperature: 150 C

Time In / Out: 1430 / 1630 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: 30.0 mg/L (Range: 28 - 32 mg/L)
4. ~~CE (composite)~~ 02.40: 44.7 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Storm Water East.

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: South (NOx) Sample ID#: 02-41

Date: 5.13.02 Time: 1400 Sampled by: Jon Rothschild
Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:___ No: X Floating Solids: yes:___ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 44.4 F-, mg/L: 0,302 pH: 6.3

TSS, mg/L: 32.5 Nitrate, mg/L: 11

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3.0

Metals(EPA 200.8), mg/L:

Copper: 0.05 Lead: 0.005 Zinc: 0.49

Notes:

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5.13.02 Oven Temp: 105 C Analyst: DV

Date In: 5.14.02 Time In/Out: 0830 / 1430

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0888	0.0888	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
6 8. 02-41	200	0.0940	0.0877	31.5
7 9. 02-41	200	0.0950	0.0883	33.5
		Average TSS		32.5

Comments: Storm water South

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Refe[redacted] Standard Methods for the Examination of Water and [W]astewater, 1998, 20th Edition, Section 2540 D, [pa]ge 2-57.
[N]ational Pollution Discharge Elimination System [P]ermit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023876

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 5·13·02 Sample Date: 5·13·02 Analyst: D.

Slope: -59.6 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1242 Date Opened: 5/9/02

10.0 mg/L: Lot #: A1198 Date Opened: 5/9/02

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
#02-41	0.302

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#02-41
After Spike Concentration:	____ mg/L	____ mg/L	2.24 mg/L
Recovery:	____ %	____ %	96.9 %

Comments: Storm Water South

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023877

BENCHSHEET

NITRATE ANALYSIS

Test Date: 5.13.02 Sample Date: 5.13.02 Analyst: DI

Data:

Sample	Nitrate Nitrogen (N)		Dilution		4.4*	=	Nitrate, mg/L
#02-41	0.5	x	1:5	x	4.4	=	11
		x		x	4.4	=	
		x		x	4.4	=	
		x		x	4.4	=	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

Sample:	#02-41		
After Spike Concentration:	1.8 mg/L	mg/L	mg/L
Recovery:	130 %	%	%

Comments: Storm Water Sample South.

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

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SCOEPA00023878

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 5.13.02 Sample Date: 5.13.02 Analyst: DJ

COD Reactor Temperature: 150 C

Time In / Out: 1430 / 1630 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.

2. Zero the DR/4000 with an RODI H_2O blank.

3. Check the 30mg/L standard: 30.0 mg/L (Range: 28 - 32 mg/L)

4. ~~CE~~ 02.41 ~~(composite)~~ grab: 44.4 mg/L.

5. OWW (composite): Direct DR/4000 reading: _____mg/L

(Dilution: ____ ml in ____ ml RODI H_2O)

X ____ (Dilution Factor) = _____mg/L

Comments: Storm Water South.

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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SCOEPA00023879

COFFEY LABORATORIES, INC.

CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075702
Project Number: 02-39-41
Project Name: Spring Storm Water - 2002
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additional Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Initials: Dn

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐NE
☐ VISA ☐ M/C Cardholder:
Card #: Expt: / /
Cash / Check / CC#: #:
Billing Codes 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date / Time	Media	Analysis Requested	Test Prof
02-39-North				5/13/02 1345		Oil/Grease - EPA 1664 Total Cu, Pb, Zn EPA-200.8	
02-40-East				5/13/02 1415		Oil/Grease - EPA-1664 Total Cu, Pb, Zn EPA-200.8	
02-41-South				5/13/02 1400		Oil/Grease EPA-1664 Total Cu, Pb, Zn EPA-200.8	

Sampled By: Justin Darr, Tom Rothschild
AUTHORIZED CUSTOMER SIGNATURE: Dianna Irish DATE: 5-15-02

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianna Irish	5-15-02	0930	[signature]	5/15/02	0955
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

May 15 02 12:42p

WACKER
Wacker Siltronic Corporation

June 25, 2002 ER023:JWC

Mr. Dennis Jeurries
Department of Environmental Quality
Northwest Water Quality Division
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-4987

RE: Annual Storm water monitoring data for July 1, 2001 toJune 30, 2002

Dear Mr. Jeurries,

Enclosed is the storm water monitoring data as required by Wacker Siltronic's NPDES Storm Water Discharge Permit number 1200-Z issued on December 23, 1997. Sampling was conducted October 23, 2001 and May 13, 2002 meeting the requirement of conducting two monitoring events per sample point between July 1, 2001 and June 30, 2002.

Enclosed are copies of the monitoring results (including lab report and chain of custody) and copies of Monthly Visual Monitoring Reports. All results are well below the benchmark guideline concentrations.

If you have any questions, please contact Jim Claxton at 503-219-7313.

Sincerely,

WACKER SILTRONIC CORPORATION

Thomas C McCue

Thomas C. McCue
Environmental Manager

cc: Tom Rothschild
Industrial Stormwater Program, City of Portland BES
SW Report 2002 File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

Bureau of Environmental Services

Industrial Source Control Division

INDUSTRIAL STORMWATER

NPDES 1200-Z MONITORING REPORT

Industry Name: Wacker Siltronic Corp.

Site Address: 7200 NW Front Avenue, Portland, OR 97210-3676

The permittee shall monitor stormwater **twice** per year for the parameters outlined in their NPDES 1200-Z Stormwater Discharge Permit Schedule B.1.a., and submit results to the City as stated in Schedule D.2.

Stormwater samples were taken for the above permittee, on these days and at these sample points:

Sample Date(s)	Sample Point(s)
10/23/01	North, East & South
5/13/02	North, East & South

The permittee shall submit by **July 15** of each year a copy of the **laboratory analysis reports**, which show analytical methods and detection limits, for stormwater samples collected for the previous monitoring year (July 1-June 30).

☐ **Monitoring Waiver Reduction Notification**:
Check the box if your facility is exercising a waiver of monitoring based on meeting benchmarks listed in Schedule A.9., AND site conditions have not changed to impact stormwater run-off. Note: This does not exclude your facility from notifying DEQ about the waiver of monitoring. Please read Schedule B of the permit to clearly understand the monitor waiver reduction guidelines. If waiver request is for select pollutants, list the parameters excluded from monitoring: _____.

☐ **No Exposure Certification**:
Check the box if your facility is required to have a NPDES 1200-Z permit, but monitoring is not required due to no exposure of stormwater to industrial activities. This no exposure certification is outlined in Schedule B.3.b, and the facility meets the requirements of Schedule B.1.e. Note: This does not exclude your facility from notifying DEQ.

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

Signature: Thomas C. McCue

Title: Thomas C. McCue, Environmental Manager

Date: 6/25/02

Stormwater Report Summary
2001/2002
(covering the sampling period from July 1, 2001 to June 30, 2002)

Total Copper mg/l	**10/23/01**	**5/13/02**
North	<0.03	0.07
South	<0.003	0.05
East	<0.03	<.03
Benchmark & Sample Date	0.1	0.1

Total Lead mg/l	**10/23/01**	**5/13/02**
North	<0.001	0.005
South	<0.001	0.005
East	<0.001	<.005
Benchmark & Sample Date	0.4	0.4

Total Zinc mg/l	**10/23/01**	**5/13/02**
North	0.16	0.48
South	0.18	0.49
East	0.35	0.31
Benchmark & Sample Date	0.6	0.6

pH S.U.	**10/23/01**	**5/13/02**
North	6.47	6.12
South	6.77	6.30
East	6.76	6.42
Lower Benchmark & Sample Date	5.5	5.5
Upper Benchmark & Sample Date	9.0	9.0

TSS mg/l	**10/23/01**	**5/13/02**
North	6.88	29.3
South	3.88	32.5
East	3.5	14.5
Benchmark & Sample Date	130	130

Oil and Grease mg/l	**10/23/01**	**5/13/02**
North	<3.0	<3.0
South	<3.0	<3.0
East	<3.0	<3.0
Benchmark & Sample Date	10	10

SCOEPA00023883

RECEIVED NOV 19 2001

Report Date: November 13, 2001
Job Number: A11025Q
PO Number: 4500075102
Project No: None Provided
Project Name: Stormwater - Fall - 2001

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210-3676

Analytical Narrative

The sample was received on 10/25/01 by Coffey Laboratories, Inc. (CLI) Sample Reception personnel under strict chain of custody protocol. The following information was provided at the time of sample reception:

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A11025Q-1	01-116 Stormwater - North	Storm Water	10/23/01	0920
A11025Q-2	01-117 Stormwater - East	Storm Water	10/23/01	0945
A11025Q-3	01-118 Stormwater - South	Storm Water	10/23/01	0925

The recommended holding time for each batch of analyses was in accordance with the data quality objectives as specified in the CLI Quality Assurance Plan unless otherwise noted.

Acceptable precision and accuracy were achieved for all analyses associated with this work order as demonstrated by the recoveries of the quality control samples analyzed concurrently with each batch.

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

Sincerely,

Technical Services

TS /atc

SCOEPA00023884

Analytical Data

Wacker Siltronic

Job Number: A11025Q
Page Number: 2 of 4

Lab Sample ID: A11025Q-1
Field ID: 01-116 NORTH
Date/Time: 10/23/01 0920
Matrix: Storm Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.16	mg/L
Lead	EPA 239.2	0.001	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023885

Analytical Data

Wacker Siltronic

Job Number: A11025Q
Page Number: 3 of 4

Lab Sample ID: A11025Q-2
Field ID: 01-117 East
Date/Time: 10/23/01 0945
Matrix: Storm Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.35	mg/L
Lead	EPA 239.2	0.001	ND	mg/L

ND means none detected at or above the detection limit listed.

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12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023886

Analytical Data

Wacker Siltronic

Job Number: A11025Q
Page Number: 4 of 4

Lab Sample ID: A11025Q-3
Field ID: 01-118 South
Date/Time: 10/23/01 0925
Matrix: Storm Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Total Oil & Grease	EPA 1664A	3.	ND	mg/L
Copper	EPA 200.7	0.03	ND	mg/L
Zinc	EPA 200.7	0.05	0.18	mg/L
Lead	EPA 239.2	0.001	ND	mg/L
Lead	EPA 239.2	0.001	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: South (Nox) Sample ID#: # 01-118

Date: 10-23-01 Time: 0925 Sampled by: Tom Roths child
Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 22.1 F-, mg/L: 5.81 pH: 6.77

TSS, mg/L: 3.88 Nitrate, mg/L: 272.8

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3 (1)

Metals (EPA 200.8), mg/L:

Copper: < 0.03 (1) Lead: < 0.001 (1) Zinc: 0.18 (1)

Notes:
(1) Coffey Laboratories; WSC# 01-118.

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 10.23.01 Oven Temp: 104 C Analyst: DJ

Date In: 10.23.01 Time In/Out: 1055 / 1414

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0921	0.0921	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
6B. #01-118	400	0.0937 ~~0.0944~~/DC	0.0920	4.25
7B. #01-118	400	0.0942	0.0928	3.5
		Average TSS		3.88

Comments: Storm water South.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

[redacted]

Standard Methods for the Examination of Water and stewater, 1998, 20th Edition, Section 2540 D, ge 2-57.
NPDES Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023889

BENCHSHEET

NITRATE ANALYSIS

Test Date: 10-23-01 Sample Date: 10-23-01 Analyst: DE

Data:

Sample	Nitrate Nitrogen(N)	x Dilution	x 4.4* =	Nitrate, mg/L
#01-118	12.4	x 1:5	x 4.4 =	27.28
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: LK131

Sample:	#01-118		
After Spike Concentration:	13.2 mg/L	mg/L	mg/L
Recovery:	80 %	%	%

Comments: Stormwater sample South

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

\\WSC-CLUSTER1_RADATA1_SERVER\RADATA1\GROUP\FACLAB\WWTP\BENCH\NITRATE4000B.DOC

SCOEPA00023890

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 10.23.01 Sample Date: 10.23.01 Analyst: DI

COD Reactor Temperature: 150 C

Time In / Out: 1005 / 1205 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: 29.8 mg/L (Range: 28 - 32 mg/L)
4. ~~CE (composite)~~ #01-118: 22.1 650 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Storm water sample South.

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 10.23.01 Sample Date: 10.23.01 Analyst: DI

Slope: -59.3 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1012 Date Opened: 9/20/01

10.0 mg/L: Lot #: A1078 Date Opened: 9/20/01

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
#01-118	5.81

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#01-118
After Spike Concentration:	____ mg/L	____ mg/L	7.95 mg/L
Recovery:	____ %	____ %	107 %

Comments: Storm water south

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 JAN 2000 Revised

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SCOEPA00023892

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: North Outfall Sample ID#: 01-116

Date: 10-23-01 Time: 0920 Sampled by: ~~Dan~~ Tom Rothschild
Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes: ____ No: X Floating Solids: yes: ____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 6.5 F-, mg/L: 0.147 pH: 6.47

TSS, mg/L: 6.88 Nitrate, mg/L: 3.08

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3 (1)

Metals(EPA 200.8), mg/L:

Copper: <0.03 (1) Lead: <0.001 (1) Zinc: 0.16 (1)

Notes:
Coffey Laboratories; WSC # 01-116

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 10-23-01 Oven Temp: 104 C Analyst: DI

Date In: 10-23-01 Time In/Out: 1055 / 1414

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0921	0.0921	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
28. #01-116	400	0.0941	0.0915	6.5
38. #01-116	400	0.0951	0.0922	7.25
		Average TSS		6.88

Comments: Storm Water North #01-116

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, Page 2-57.
2. NPDES Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023894

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 10-23-01 Sample Date: 10-23-01 Analyst: _____

COD Reactor Temperature: 150 C

Time In / Out: 1005 / 1205 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.

2. Zero the DR/4000 with an RODI H_2O blank.

3. Check the 30mg/L standard: _____mg/L (Range: 28 - 32 mg/L)

4. ~~CE~~ #01-116 (composite): 6.5 mg/L.

5. OWW (composite): Direct DR/4000 reading: _____mg/L

(Dilution: ____ ml in ____ ml RODI H_2O)

X ____ (Dilution Factor) = _____mg/L

Comments: Stormwater North - #01-116

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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BENCHSHEET

NITRATE ANALYSIS

Test Date: 10-23-01 Sample Date: 10-23-01 Analyst: DI

Data:

Sample	Nitrate Nitrogen(N)	x Dilution	x 4.4* =	Nitrate, mg/L
#01-116	0.7	x N/A	x 4.4 =	3.08
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: 48131

Sample:	#01-116		
After Spike Concentration:	1.5 mg/L	mg/L	mg/L
Recovery:	80 %	%	%

Comments: Storm Water North #01-116

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

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BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 10·23·01 Sample Date: 10·23·01 Analyst: DL

Slope: -59.3 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1012 Date Opened: 9/20/01

10.0 mg/L: Lot #: A1078 Date Opened: 9/20/01

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
#01-116	0.147

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#01-116
After Spike Concentration:	____ mg/L	____ mg/L	1.91 mg/L
Recovery:	____ %	____ %	88.2 %

Comments: Stormwater North #01-116

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 JAN 2000 Revised

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SCOEPA00023897

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: East (Riverbank) Sample ID#: 01.117

Date: 10.23.01 Time: ~~0920~~ DI 0945 Sampled by: Tom Rothschild Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 8.3 F-, mg/L: 0.196 pH: 6.76

TSS, mg/L: 3.5 Nitrate, mg/L: 1.76

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3 (1)

Metals(EPA 200.8), mg/L:

Copper: <0.03 (1) Lead: <0.001 (1) Zinc: 0.35 (1)

Notes:
(1) Coffey Laboratories; WSC #01117

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 10-23-01 Oven Temp: 104 C Analyst: DJ

Date In: 10-23-01 Time In/Out: 1055 / 1414

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0921	0.0921	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
4S. 01-117	400	0.0932	0.0917	3.75
5S. 01-117	400	0.0953	0.0940	3.25
		Average TSS		3.5

Comments: Stormwater East

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: [illegible]rmit: monthly avg. 23 mg/L, daily max. 61 mg/L.

R[illegible]ard Methods for the Examination of Water and [illegible]ter, 1998, 20th Edition, Section 2540 D, [illegible]-57.
[illegible]S Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023899

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 10.23.01 Sample Date: 10.23.01 Analyst: DI

COD Reactor Temperature: 150 C

Time In / Out: 1005 / 1205 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: _____mg/L (Range: 28 - 32 mg/L)
4. ~~CE~~ #01.117 (~~composite~~): 8.3 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Stormwater #01-117.

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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BENCHSHEET

NITRATE ANALYSIS

Test Date: 10·23·01 Sample Date: 10·23·01 Analyst: DI

Data:

Sample	Nitrate Nitrogen (N)	x Dilution	x 4.4* =	Nitrate, mg/L
#01.117	0.4	x N/R	x 4.4 =	1.76
		x	x 4.4 =	
		x	x 4.4 =	
		x	x 4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: 48131

Sample:	#01.117		
After Spike Concentration:	1.4 mg/L	mg/L	mg/L
Recovery:	100 %	%	%

Comments: Stormwater East.

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

\\WSC-CLUSTER1_RADATA1_SERVER\RADATA1\GROUP\FACLAB\WWTP\BENCH\NITRATE4000B.DOC

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 10.23-01 Sample Date: 10.23.01 Analyst: DJ

Slope: -59.3 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1012 Date Opened: 9.20.01

10.0 mg/L: Lot #: A1028 Date Opened: 9.20.01

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
#01.117	0.196

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#01.117
After Spike Concentration:	____ mg/L	____ mg/L	2.18 mg/L
Recovery:	____ %	____ %	99.2 %

Comments: Storm water sample East.

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 JAN 2000 Revised

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SCOEPA00023902

COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, OR.
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075102
Project Number:
Project Name: Stormwater - Fall - 2001
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additonal Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [ ] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: DL

FOR LABORATORY USE ONLY Page ____ of ____
Job Number:
Custabbr: ☐NEW
☐ VISA ☐ M/C Cardholder:
Card #: Exp: / /
Cash / Check / CC:$ #:
Billing Code: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date	Time	Media	Analysis Requested	Test/ Profile
01-116				10.23.01	0920		oil+grease-EPA·1664 Copper, Lead, Zinc - EPA·200.8	
01·117				10.23.01	0945		oil+grease EPA·1664 Copper, Lead, Zinc - EPA·200.8	
01-118				10.23.01	0925		oil+grease - EPA·1664 Copper, Lead, Zinc - EPA·200.8	

Sampled By: ~~DL~~ Tom Rothschild, Gary Kent
AUTHORIZED CUSTOMER SIGNATURE: Dianne Lush DATE: 10.25.01

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianne Lush	10.25.01	0900	DLZ	10/25	1055
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

Report Date: 06/03/2002
Job Number: A20515AQ
PWSID:
PO Number: 45000751002
Project No.: 02-39-41
Project Name: Spring Stormwater 2002

Tom Rothschild
Wacker Siltronic
7200 NW Front Avenue
Portland, OR 97210

Sample Information

Laboratory Sample ID	Field Identification	Matrix	Collection Date	Collection Time
A20515AQ-1	02-39 North	Storm Water	05/13/2002	1345
A20515AQ-2	02-40 East	Storm Water	05/13/2002	1415
A20515AQ-3	02-41 South	Storm Water	05/13/2002	1400

Analytical results are on the following page(s).

Sincerely,

Technical Services

The data submitted in this report is for the sole and exclusive use of the above-named client. All samples associated with the work order will be retained a maximum of 15 days from the report date or until the maximum holding time expires. All results pertain only to samples submitted.

Thank you for allowing Coffey Laboratories to be of service to you. If you have questions or need further assistance, please do not hesitate to call our Customer Services Department.

TS/atc

SCOEPA00023904

Sample Identification

Lab Sample ID#: A20515AQ-1 02-39 North

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	0.07 mg/L	EPA 200.7	0.03 mg/L	CV
Lead	0.005 mg/L	EPA 239.2	0.005 mg/L	CFS
Total Oil & Grease	ND mg/L	EPA 1664A	3. mg/L	BAB
Zinc	0.48 mg/L	EPA 200.7	0.05 mg/L	CV

ND means none detected at or above the detection limit listed.

6/3/02

Sample Identification

Lab Sample ID#: A20515AQ-2 02-40 East

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	ND mg/L	EPA 200.7	0.03 mg/L	CV
Lead	ND mg/L	EPA 239.2	0.005 mg/L	CFS
Total Oil & Grease	ND mg/L	EPA 1664A	3. mg/L	BAB
Zinc	0.31 mg/L	EPA 200.7	0.05 mg/L	CV

ND means none detected at or above the detection limit listed.

6/3/02

Sample Identification

Lab Sample ID#: A20515AQ-3 02-41 South

Inorganic Chemicals

Contaminant	Analysis	Method	Detection Limit	Analyst
Copper	0.05 mg/L	EPA 200.7	0.03 mg/L	CV
Lead	0.005 mg/L	EPA 239.2	0.005 mg/L	CFS
Total Oil & Grease	ND mg/L	EPA 1664A	3. mg/L	BAB
Zinc	0.49 mg/L	EPA 200.7	0.05 mg/L	CV

ND means none detected at or above the detection limit listed.

6/3/02

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: North (river) Sample ID#: 02.39

Date: 5.13.02 Time: 1345 Sampled by: Tom Rothschild
Justin Derr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 41.4 F-, mg/L: 0.240 pH: 6.12

TSS, mg/L: 29.25 Nitrate, mg/L: 1.76

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: < 3.0

Metals(EPA 200.8), mg/L:

Copper: 0.07 Lead: 0.005 Zinc: 0.48

Notes:

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5/13/02 Oven Temp: 105 C Analyst: D.

Date In: 5/14/02 Time In/Out: 0830 / 1430

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0888	0.0888	
2. CE FAB-1	200			
3. CE FAB-1	200			
			Average CE FAB-1 TSS	
4. CE FAB-2				
5. CE FAB-2				
			Average CE FAB-2 TSS	
6. OWW	50			
7. OWW	50			
			Average OWW TSS	
2 8. 02-39	200	0.0932	0.0873	29.5
3 9. 02-39	200	0.0942	0.0884	29
			Average TSS	29.25

Comments: Storm Water North.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

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tandard Methods for the Examination of Water and
astewater, 1998, 20th Edition, Section 2540 D,
ıge 2-57.
ıtional Pollution Discharge Elimination System
ermit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023909

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 5.13.02 Sample Date: 5.13.02 Analyst: DJ

Slope: -59.6 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1242 Date Opened: 5/9/02

10.0 mg/L: Lot #: A1198 Date Opened: 5/9/02

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	~~0.~~
02.39	0.240

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: Ricca
Lot Number: 1106406

	CE FAB-1	CE FAB-2	0239
After Spike Concentration:	____ mg/L	~~0~~ mg/L	2.20 mg/L
Recovery:	____ %	____ %	98 %

Comments: Storm Water North -

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

SCOEPA00023910

BENCHSHEET

NITRATE ANALYSIS

Test Date: 5.13.02 Sample Date: 5.13.02 Analyst: DI

Data:

Sample	Nitrate Nitrogen (N)		Dilution		4.4*		Nitrate, mg/L
#02-39	0.4	x	N/A	x	4.4	=	1.76
		x		x	4.4	=	
		x		x	4.4	=	
		x		x	4.4	=	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

Sample:	02-39		
After Spike Concentration:	1.3 mg/L	mg/L	mg/L
Recovery:	90 %	%	%

Comments: Storm Water North

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

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SCOEPA00023911

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 5/13/02 Sample Date: 5-13-02 Analyst: Di

COD Reactor Temperature: 150 C

Time In / Out: 1430 / 1630 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.

2. Zero the DR/4000 with an RODI H_2O blank.

3. Check the 30mg/L standard: 30.0 mg/L (Range: 28 - 32 mg/L)
02.39 grab
4. ~~CE (composite)~~: 41.4 mg/L.

5. OWW (composite): Direct DR/4000 reading: _____mg/L

(Dilution: ____ ml in ____ ml RODI H_2O)

X ____ (Dilution Factor) = _____mg/L

Comments: Storm Water North

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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SCOEPA00023912

WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: East (river) Sample ID#: 02-40

Date: 5/13/02 Time: 1415 Sampled by: Tom Rothschild
Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:____ No: X Floating Solids: yes:____ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 44.7 F-, mg/L: 0.194 pH: 6.42

TSS, mg/L: 14.5 Nitrate, mg/L: Ø

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3.6

Metals(EPA 200.8), mg/L:

Copper: <0.03 Lead: <0.005 Zinc: 0.31

Notes:

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5-13-02 Oven Temp: 105 C Analyst: DT

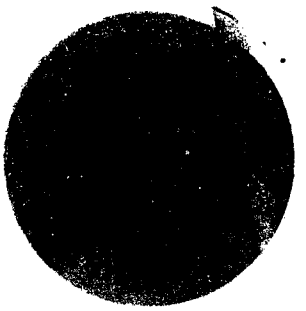
Date In: 5-14-02 Time In/Out: 0830 / 1430

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0888	0.0888	
2. CE FAB-1	200			
3. CE FAB-1	200			
			Average CE FAB-1 TSS	
4. CE FAB-2				
5. CE FAB-2				
			Average CE FAB-2 TSS	
6. OWW	50			
7. OWW	50			
			Average OWW TSS	
4@. 02-40	200	0.0896	0.0867	14.5
5@. 02-40	200	0.0903	0.0874	14.5
			Average TSS	14.5

Comments: Storm Water East.

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.



. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023914

BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 5·13·02 Sample Date: 5·13·02 Analyst: Di

Slope: -59.6 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1242 Date Opened: 5/9/02

10.0 mg/L: Lot #: A1198 Date Opened: 5/9/02

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
02510	0.174

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#02-40
After Spike Concentration:	____ mg/L	____ mg/L	2.04 mg/L
Recovery:	____ %	____ %	93.3 %

Comments: Storm Water East.

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023915

BENCHSHEET

NITRATE ANALYSIS

Test Date: 5-13-02 Sample Date: 5-13-02 Analyst: _____

Data:

Sample	Nitrate Nitrogen(N)		Dilution		4.4*	=	Nitrate, mg/L
#02-40	0.0	x	N/A	x	4.4	=	0
		x		x	4.4	=	
		x		x	4.4	=	
		x		x	4.4	=	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

Sample:	#02-40	_____	_____
After Spike Concentration:	0.9 mg/L	_____ mg/L	_____ mg/L
Recovery:	90%	_____ %	_____ %

Comments: Storm Water East -

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

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SCOEPA00023916

BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 5/13/02 Sample Date: 5/13/02 Analyst: DV

COD Reactor Temperature: 150 C

Time In / Out: 1430 / 1630 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.
2. Zero the DR/4000 with an RODI H_2O blank.
3. Check the 30mg/L standard: 30.0 mg/L (Range: 28 - 32 mg/L)
4. ~~CE (composite)~~ 02.40: 44.7 mg/L.
5. OWW (composite): Direct DR/4000 reading: _____mg/L

   (Dilution: ____ ml in ____ ml RODI H_2O)

   X ____ (Dilution Factor) = _____mg/L

Comments: Storm Water East.

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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WACKER SILTRONIC CORPORATION
STORM WATER RUN-OFF SAMPLE

Location: South (NOx) Sample ID#: 02-41

Date: 5.13.02 Time: 1400 Sampled by: Jon Rothschild
Justin Darr

OBSERVATIONS UPON SAMPLING:

Oil Sheen: yes:___ No: X Floating Solids: yes:___ No: X

IN HOUSE ANALYTICAL DATA:

COD, mg/L: 44.4 F-, mg/L: 0,302 pH: 6.3

TSS, mg/L: 32.5 Nitrate, mg/L: 11

OUTSIDE LAB ANALYTICAL DATA:

Oil & Grease (EPA 1664), mg/L: <3.0

Metals(EPA 200.8), mg/L:

Copper: 0.05 Lead: 0.005 Zinc: 0.49

Notes:

DEM 10 Oct 96
DEI 10 May 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 5.13.02 Oven Temp: 105 C Analyst: DV

Date In: 5.14.02 Time In/Out: 0830 / 1430

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0888	0.0888	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2				
5. CE FAB-2				
		Average CE FAB-2 TSS		
6. OWW	50			
7. OWW	50			
		Average OWW TSS		
6 8. 02-41	200	0.0940	0.0877	31.5
7 9. 02-41	200	0.0950	0.0883	33.5
		Average TSS		32.5

Comments: Storm water South

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Refe[redacted] Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, Page 2-57.
ional Pollution Discharge Elimination System
nit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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BENCHSHEET

FLUORIDE ANALYSIS

Test Date: 5·13·02 Sample Date: 5·13·02 Analyst: D.

Slope: -59.6 (Range: -54 to -60 mV)

Standards:

1.0 mg/L: Lot #: A1242 Date Opened: 5/9/02

10.0 mg/L: Lot #: A1198 Date Opened: 5/9/02

Data:

Sample	Fluoride, mg/L
CE FAB 1	
CE FAB-2	
#02-41	0.302

Quality Control: Spike each of the above samples with 0.1 ml of 1000 mg/L Standard. The Fluoride concentration should increase by 2.0 mg/L.
Manufacturer: RICCA
Lot Number: 1106406

	CE FAB-1	CE FAB-2	#02-41
After Spike Concentration:	____ mg/L	____ mg/L	2.24 mg/L
Recovery:	____ %	____ %	96.9 %

Comments: Storm Water South

Note: NPDES permit: monthly avg. 17.4 mg/L, daily max. 32 mg/L.

References:

1. Standard Methods For The Examination of Water And Wastewater, 1998 20th Edition, Section 4500-F C, page 4-81.
2. Orion Research Manual for the Fluoride Electrode, Model 940900, 1991.
3. NPDES Permit #101128.

TJR 06 Apr 1987
DEM 11 Jan 2000 Revised

SCOEPA00023920

BENCHSHEET

NITRATE ANALYSIS

Test Date: 5.13.02 Sample Date: 5.13.02 Analyst: DI

Data:

Sample	Nitrate Nitrogen (N)		Dilution		4.4* =	Nitrate, mg/L
#02-41	0.5	x	1:5	x	4.4 =	11
		x		x	4.4 =	
		x		x	4.4 =	
		x		x	4.4 =	

*Multiplication of 4.4 converts Nitrate Nitrogen to Nitrate.

Quality Control: Spike each of the above samples with 0.1 ml of 100 mg/L Standard. The Nitrate Nitrogen (N) concentration should increase by 1.0 mg/L.
Manufacturer: HACH
Lot Number: A1361

Sample:	#02-41		
After Spike Concentration:	1.8 mg/L	mg/L	mg/L
Recovery:	130 %	%	%

Comments: Storm Water Sample South.

References:
1. Standard Methods For The Examination of Water And Wastewater, 1998, 20th Edition, Section 4500-N03-E, page 4-117.
2. Hach DR/4000 Spectrophotometer Instrument Manual; Nitrogen, Nitrate Method 8039, High Range:0-30.0 mg/L Cadmium Reduction Method. HACH Program 2530.

TJR/JB 27 Jun 1996
DEI 20 Sept 2001 Revised

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BENCHSHEET

Chemical Oxygen Demand (COD, ULR)

Date: 5.13.02 Sample Date: 5.13.02 Analyst: DJ

COD Reactor Temperature: 150 C

Time In / Out: 1430 / 1630 (2 Hour Digestion)

1. DR/4000 Method 8000, HACH Program 2700.

2. Zero the DR/4000 with an RODI H_2O blank.

3. Check the 30mg/L standard: 30.0 mg/L (Range: 28 - 32 mg/L)

4. ~~CE~~ 02.41 ~~(composite)~~ grab: 44.4 mg/L.

5. OWW (composite): Direct DR/4000 reading: _____mg/L

(Dilution: ____ ml in ____ ml RODI H_2O)

X ____ (Dilution Factor) = _____mg/L

Comments: Storm Water South.

TJR 31 Dec 91
DEM 12 Sep 97 Revised

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COFFEY LABORATORIES, INC.
CHAIN OF CUSTODY AGREEMENT

CENTRAL OREGON BRANCH
827 SW 7th
Redmond, OR 97756
PHONE/FAX (541) 548-0972

CORPORATE HEADQUARTERS
12423 NE Whitaker Way
Portland, OR 97230
(503) 254-1794 FAX: (503) 254-1452

EASTERN OREGON BRANCH
419 SW 5th
Pendleton, OR 97801
PHONE/FAX (541) 276-0385

Report Attention: Tom Rothschild
Company Name: Wacker Siltronic
Mailing Address: 7200 N.W. Front Ave
Portland, Oregon
Phone: (503) 219-7374 FAX: (503) 417-4144

Report Instructions (Special - Additional- Job Specific):

PO Number: 4500075702
Project Number: 02-39-41
Project Name: Spring Storm Water - 2002
EPA Protocol Containers: Y/N Other:

Sample Turnaround
- [x] Standard
- [ ] Priority (Additional Fee)
- [ ] Rush (Additional Fee)
- [ ] Emergency (Additional Fee)

Reporting Request
- [ ] State Compliance Format
- [x] FAX Results - Preliminary
- [x] FAX Results-Final
- [ ] Verbals Results
- [ ] Extra Report Copy (Fees Associated)

Initials: Dn

FOR LABORATORY USE ONLY Page ____ of ____
Job Number: _____
Custabbr: _____ ONE
☐ VISA ☐ M/C Cardholder: _____
Card #: _____ Exp: ____/____
Cash / Check / CC#: _____ #: _____
Billing Codes: 1 2 3 4
QC LEVEL: 1 2 3 4
FEDX BUS COURIERS UPS LAB CLIENT MAIL AIR

Sample ID	Loc.	ID	#	Collection Date / Time		Media	Analysis Requested	Test Prof.
02-39-North				5/13/02	1345		Oil/Grease - EPA 1664 Total Cu, Pb, Zn EPA-200.8	
02-40-East				5/13/02	1415		Oil/Grease - EPA-1664 Total Cu, Pb, Zn EPA-200.8	
02-41-South				5/13/02	1400		Oil/Grease EPA-1664 Total Cu, Pb, Zn EPA-200.8	

Sampled By: Justin Derr, Tom Rothschild
AUTHORIZED CUSTOMER SIGNATURE: Dianna Irish DATE: 5-15-02

Sample Comments	Relinquished by: (Please Sign)	Date	Time	Received by: (Sign)	Date	Time
	Dianna Irish	5-15-02	0930	[signature]	5/15/02	0955
				LAB		

White Copy-Laboratory Yellow Copy - Customer

COMPLETE THIS FORM PER INSTRUCTIONS ON REVERSE SIDE

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CLI WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THE CLIENT COPY.

May 15 02 12:42p

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	31 July	2001
			North	South	East
Floating Solids	No visible discharge	Yes or No	(1)	(1)	(1)
Oil and Grease Sheen*	No visible sheen	Yes or No	(1)	(1)	(1)

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

(1) Monthly visual inspection not done. Insufficient rainfall.
JJR

SCOEPA00023924

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	31 August 2001	
			North	South	East
Floating Solids	No visible discharge	Yes or No	(1)	(1)	(1)
Oil and Grease Sheen*	No visible sheen	Yes or No	(1)	(1)	(1)

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

(1) monthly visual inspection not done. Inefficient rainfall. JSR

SCOEPA00023925

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	9/25/01	
			North	South	East
Floating Solids	No visible discharge	Yes or No	NO	NO	NO
Oil and Grease Sheen*	No visible sheen	Yes or No	NO	NO	NO

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	10-23-01	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:	10.23-01	
			North	South	East
Total Copper	0.1	Mg/l	<0.03	<0.03	<0.03
Total Lead	0.4	Mg/l	<0.001	<0.001	<0.001
Total Zinc	0.6	Mg/l	0.16	0.18	0.35
pH	5.5-9	Su	6.47	6.77	6.76
TSS	130	Mg/l	6.88	3.88	3.5
Oil and Grease	10	Mg/l	<3.0	<3.0	<3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE: 19 Nov 2001		
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

JJR

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

SCOEPA00023928

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	12-31-01	
			North	South	East
Floating Solids	No visible discharge	Yes or No	no	no	no
Oil and Grease Sheen*	No visible sheen	Yes or No	no	no	no

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	1-21-02	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	2/21/02	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	3-11-02	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	April	2002
			North	South	East
Floating Solids	No visible discharge	Yes or No	See note below		
Oil and Grease Sheen*	No visible sheen	Yes or No			

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

Note* The monthly visuals were not done in April. This was due to waiting to cordinate with our semi-annual sampling, a lack of rain & timing made this impossible — Di

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	5-13-02	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:	5-13-02	
			North	South	East
Total Copper	0.1	Mg/l	0.07	0.05	<0.03
Total Lead	0.4	Mg/l	0.005	0.005	<0.005
Total Zinc	0.6	Mg/l	0.48	0.49	0.31
pH	5.5-9	Su	6.12	6.3	6.42
TSS	130	Mg/l	29.25	32.5	14.5
Oil and Grease	10	Mg/l	<3.0	<3.0	<3.0

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

Wacker Siltronic Corporation Storm water Monitoring

STORM WATER SAMPLING – Monthly (when discharging):

PARAMETER	BENCHMARK[1]	UM	DATE:	6-17-02	
			North	South	East
Floating Solids	No visible discharge	Yes or No	No	No	No
Oil and Grease Sheen*	No visible sheen	Yes or No	No	No	No

- If oil and grease sheen is present please sample for total oil and grease.
- If there is no rain event in the month write "no rain" in the box.

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.

STORM WATER SAMPLING – Semiannual:

PARAMETER	BENCHMARK[1]	UM	DATE:		
			North	South	East
Total Copper	0.1	Mg/l			
Total Lead	0.4	Mg/l			
Total Zinc	0.6	Mg/l			
pH	5.5-9	Su			
TSS	130	Mg/l			
Oil and Grease	10	Mg/l			

1. "Benchmark" is the term used by DEQ in the storm water permit. It is essentially a "limit". If a benchmark is exceeded resample and contact Petra Hoy in Environmental Engineering.
2. Please submit monitoring results and benchsheets to Petra Hoy.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME Wacker Siltronic Corporation

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	5	1	TO	2002	5	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Process Waste Water Flow	SAMPLE MEASUREMENT	984,000	1,071,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	57.7	73.6	lbs/day	--	7.0	9.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	24.5	39.2	lbs/day	--	3.0	4.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	<0.01	<0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	67.2	73.5	lbs/day	--	8.1	8.7	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 6 | DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

ERO 20 Dec

EPA Form 3320-1 (Rev. 8-88) Previous editions may be used. (REPLACES EPA FORM T-49 WHICH MAY NOT BE USED.)

SCOEPA00023936

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	5	1	TO	2002	5	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	QUANTITY OR LOADING (54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	QUALITY OR CONCENTRATION (46-53) AVERAGE	QUALITY OR CONCENTRATION (54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 per violation, imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 6 | DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023937

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME Wacker Siltronic Corporation

ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.

LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16)	(17-19)
101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	5	1	TO	2002	5	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	122,000	197,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.2	0.6	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

Thomas C. McCue

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE

AREA CODE	NUMBER
503	243-2020

DATE

YEAR	MO	DAY
02	6	10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023938

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR (20-21)	MO (22-23)	DAY (24-25)		YEAR (26-27)	MO (28-29)	DAY (30-31)
FROM	2002	5	1	TO	2002	5	31

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(4 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,106,000	1,226,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	67.1	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.0	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:
Thomas McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 6 | DAY 10

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

J:\ENVIRONMENTAL\NPDES\NPDESPER.DOC

SCOEPA00023939

WACKER
Wacker Siltronic Corporation

June 11, 2002 ER:019 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the May 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C McCue

Thomas C. McCue
Environmental Manager

enclosure:
Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **June 15, 2002**

SAMPLING PERIOD: May, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

FOR WACKER SILTRONIC CORP:

Signature: Thomas C McCue Date: 6/11/02

Thomas C. McCue, Manager, Environmental Engineering

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot

SCOEPA00023941

WACKER
Wacker Siltronic Corporation

May 6, 2002 ER:015 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the April 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
Industrial Discharge Report

cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

SCOEPA00023942

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **May 15, 2002**

SAMPLING PERIOD: April, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No excursions				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas G. McCune Date: May 7, 2002

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot

SCOEPA00023943

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

101128	Outfall 001
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	4	1	TO	2002	4	30

NOTE: Read instructions before completing this form.

PARAMETER		(1 Card Only) QUANTITY OR LOADING			(1 Card Only) QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Process Waste Water Flow	SAMPLE MEASUREMENT	973,000	1,093,000	gal/day	--	--	--	--		Continuous totalizing recorder	
	PERMIT REQUIREMENT	--	--		--	--	--				
BOD	SAMPLE MEASUREMENT	40.5	46.9	lbs/day	--	5.0	6.0	mg/l		1/7	24HC
	PERMIT REQUIREMENT	339	753		--	15	30				
TSS	SAMPLE MEASUREMENT	27.9	38.5	lbs/day	--	3.4	4.8	mg/l		1/7	24HC
	PERMIT REQUIREMENT	520	1532		--	23	61				
Cr^{+6} (1)	SAMPLE MEASUREMENT			lbs/day	--			mg/l		Batch	
	PERMIT REQUIREMENT	0.11	0.27		--	0.02	0.05				
Cr^{Total}	SAMPLE MEASUREMENT	< 0.01	< 0.01	lbs/day	--	<0.01	<0.01	mg/l		1/7	24HC
	PERMIT REQUIREMENT	0.2	0.6		--	0.3	1.0				
Fluoride	SAMPLE MEASUREMENT	59.2	69.8	lbs/day	--	7.3	8.6	mg/l		1/7	24HC
	PERMIT REQUIREMENT	393	804		--	17.4	32				
Total Phosphate	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.2	mg/l		1/7	24HC
	PERMIT REQUIREMENT	--	--		--	23	61				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC 1001 AND 33 USC 1319 (Penalties under these statutes may include fines up to $10,000 and up to maximum imprisonment of between 6 months and 5 years)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 5 | DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Chrome batches are no longer being treated on site.

E014

SCOEPA00023944

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME: Wacker Siltronic Corporation

ADDRESS: PO Box 83180
Portland, OR 97283-0810

FACILITY: 7200 NW Front Ave.

LOCATION: Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER: 101128

(17-19) DISCHARGE NUMBER: Outfall 001

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	4	1	TO	2002	4	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
TTO	SAMPLE MEASUREMENT	--	--	lbs/day	--	--	<0.01	mg/l		1/ 30	Grab
	PERMIT REQUIREMENT	--	--		--	--	1.37				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Tom McCue
Environmental Manager

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and a maximum imprisonment of between 6 months and 5 years.)

Wacker Siltronic Corp. by:

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 5 | DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023945

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810

FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-10)	(11-15)
101128	Outfall 002
PERMIT NUMBER	DISCHARGE NUMBER

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	4	1	TO	2002	4	30
	(17-20)	(21-22)	(23-24)		(25-28)	(29-30)	(31-32)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
MV-3 Flow	SAMPLE MEASUREMENT	127,000	230,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
MV-3 Total phosphates	SAMPLE MEASUREMENT	--	--	--	--	0.1	0.1	mg/l		1/ 7	Grab
	PERMIT REQUIREMENT	--	--		--	2.0	5.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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. SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 5 | DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SCOEPA00023946

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME Wacker Siltronic Corporation
ADDRESS PO Box 83180
Portland, OR 97283-0810
FACILITY 7200 NW Front Ave.
LOCATION Portland, OR 97210

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(5-10) PERMIT NUMBER	(11-15) DISCHARGE NUMBER
101128	Outfall 003

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2002	4	1	TO	2002	4	30
	(16-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Outfall flow	SAMPLE MEASUREMENT	1,101,000	1,220,000	gal/day	--	--	--	--		Continuous	
	PERMIT REQUIREMENT	--	--		--	--	--				
Outfall temperature	SAMPLE MEASUREMENT	--	--	--	--	--	67.3	°F		1/7	Grab
	PERMIT REQUIREMENT	--	--		--	--	85				
Outfall pH	SAMPLE MEASUREMENT	--	--	--	>6.0	7.1	<9.0			Continuous	
	PERMIT REQUIREMENT	--	--		6.0	--	9.0				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Tom McCue
Environmental Manager
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED 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 SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or imprisonment of between 6 months and 5 years).

Wacker Siltronic Corp. by:
Thomas C. McCue
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 503 | NUMBER 243-2020

DATE: YEAR 02 | MO 5 | DAY 6

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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SCOEPA00023947

WACKER
Wacker Siltronic Corporation

April 9, 2002 ER:013 JWC

Tim Dean
Bureau of Environmental Services
City of Portland
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Dear Mr. Dean,

Enclosed is the March 2002 Industrial Discharge Report for Wacker Siltronic Corporation Municipal Discharge Permit 469-01. Wacker Siltronic has operated in compliance with the Permit for this reporting period.

Total Suspended Solids are a little high. The average of three results is 461 ppm. The individual values are 3/7/02: 220 mg/L, 3/14/02: 208 mg/L and 3/21/02: 956 mg/L. TSS usually runs between 100 ppm and 300 ppm. We have enclosed a chart of the last 25 TSS measurements.

We have added the TSS analysis to the Wacker Corrective Action System to investigate unusual results. The Facilities lab will measure TSS weekly for three months. If a high result is obtained, the lab will contact the WasteWater Treatment Operators to check the system operations log for any unusual operations and contact the Wacker Environmental Department.

If you have any questions, please contact Jim Claxton @ 503-219-7313

Regards,

WACKER SILTRONIC CORPORATION

Thomas C. McCue
Environmental Manager

enclosure:
(1) Industrial Discharge Report
(2) Chart of TSS results for 2001 and 2002
cc: Tom Rothschild
POTW-IDR File

Wacker Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210-3676
Phone (503) 243-2020
TDD (503) 241-7519

A QS-9000 and ISO 14001 Certified Corporation

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **April 15, 2002**

SAMPLING PERIOD: January - March, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
March 2002	#1B (Fab 2)	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
pH	No excursions	SU		5.0 - 11.5	N/A	
TTOs (Volatiles)	EPA 8260	< 0.02 mg/L	0.01	1.37 mg/L	N/A	SEE CERTIFICATION STATEMENT BELOW

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	#1B (Fab 2)	COMPOSITE

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
Arsenic (Total)	EPA 200.8	< 0.05 mg/L	0.05	0.2 mg/L	0.83 mg/L	
Total Suspended Solids	EPA 160.2	461 mg/L	0.1	N/A	N/A	

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority.

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

Signature: Thomas C McCue Date: April 10, 2002

SCOEPA00023949

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Wacker Siltronic Corporation

PERMIT NUMBER: 469.001

REPORT DUE DATE: **April 15, 2002**

SAMPLING PERIOD: March, 2002

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

CONTINUOUSLY MONITORED pH - EPA METHOD 150.1

POINT OF COMPLIANCE	pH METER BRAND	pH METER MODEL	pH Limit
#1B (Fab 2)	Foxboro	861	5.0 - 11.5 S.U.

DATE	STARTING TIME (military time)	MOST EXTREME pH EXCURSION	DURATION (minutes)	VIOLATION? (circle one)		COMMENTS
No Excursions				YES	(NO)	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	
				YES	NO	

Instructions: Industrial Source Control Division (ISCD) must be notified of all discharge violations within 24 hours of your knowledge of the violation. Report all pH excursions on this form and circle YES if they are a violation. Include any appropriate comments in the Comment column regarding the nature of the excursion. Attach supporting data or explanations to this report. You are also required to document corrective actions you have taken in response to the excursion.

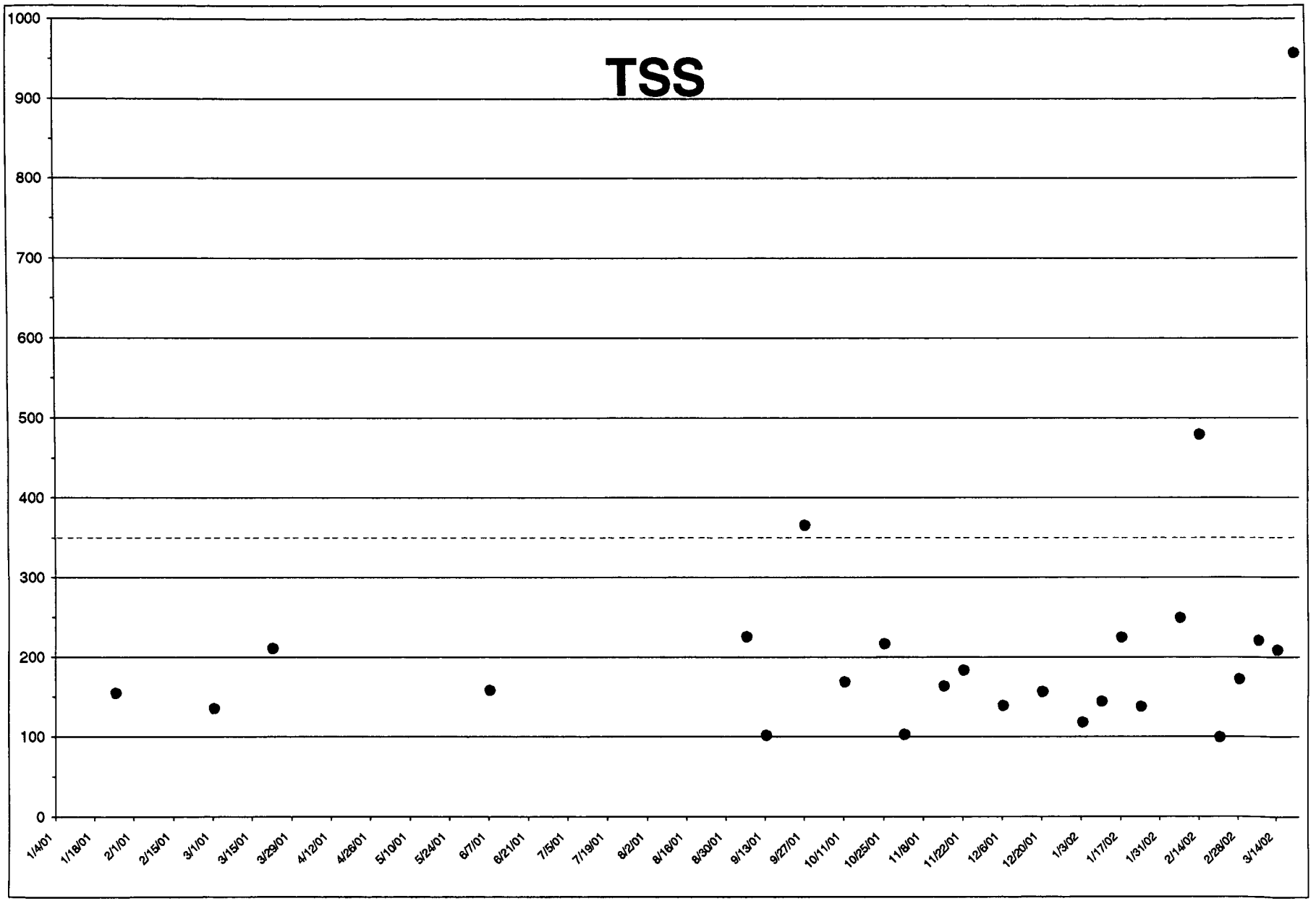
Violations:
1. pH excursions outside the range of 5.0 - 11.5 SU for a total duration of more than 15 minutes in any 24 hour period.
2. pH excursions less than or equal to 4.5 SU or greater than or equal to 12.5 SU regardless of duration.

Non-Violations: You may contend an excursion does not represent a pH discharge violation if it does not meet the criteria listed above. Circle NO in the VIOLATION? Column and include a copy of the pH log or pH chart recording showing the excursion. The final violation status of the excursion will be determined by the ISCD.

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

Signature: Thomas C McCue Date: April 10, 2002

S:\CUSTOMER\IU-W\Wacker Siltronic\INSP-MON\2002 C pH SMR.dot


TSS
1000
900
800
700
600
500
400
300
200
100
0
1/4/01
1/18/01
2/1/01
2/15/01
3/1/01
3/15/01
3/29/01
4/12/01
4/26/01
5/10/01
5/24/01
6/7/01
6/21/01
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8/16/01
8/30/01
9/13/01
9/27/01
10/11/01
10/25/01
11/8/01
11/22/01
12/6/01
12/20/01
1/3/02
1/17/02
1/31/02
2/14/02
2/28/02
3/14/02

BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3.7.02 Oven Temp: 105 C Analyst: Qi

Date In: 3.8.02 Time In/Out: 1000 / 1330

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0894	0.0894	
2. CE FAB-1	200			
3. CE FAB-1	200			
			Average CE FAB-1 TSS	
4. CE FAB-2	400	0.0882	0.0872	2.5
5. CE FAB-2	400	0.0887	0.0878	2.25
			Average CE FAB-2 TSS	2.38
6. OWW	50	0.1002	0.0887	230
7. OWW	50	0.0997	0.0892	210
			Average OWW TSS	220
8.				
9.				
			Average TSS	

Comments: _____

_____

_____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 14 Mar 2002 Oven Temp: 104 C Analyst: TJR

Date In: 14 Mar 2002 Time In/Out: 0933 / 1507

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0878	0.0878	-
2. CE FAB-1	200	-	-	-
3. CE FAB-1	200	-	-	-
		Average CE FAB-1 TSS		
4. CE FAB-2	200	0.0897	0.0891	3.0
5. CE FAB-2	200	0.0889	0.0883	3.0
		Average CE FAB-2 TSS		3.0
6. OWW	50	0.0984	0.0882	~~202~~ 204
7. OWW	50	~~0.0984~~ 0.0982	0.0876	212
		Average OWW TSS		~~207~~ 208
8.				
9.				
		Average TSS		

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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BENCHSHEET

TOTAL SUSPENDED SOLIDS (TSS)

Sample Date: 3.21.02 Oven Temp: 105 C Analyst: Di

Date In: 3.21.02 Time In/Out: 1300 / 1500

Sample	Vol, ml	Gross Wt, g	Tare Wt, g	TSS, mg/L
1. Blank	NA	0.0877	0.0877	
2. CE FAB-1	200			
3. CE FAB-1	200			
		Average CE FAB-1 TSS		
4. CE FAB-2	~~500~~ 400	0.0897	0.0891	1.5
5. CE FAB-2	400	0.0886	0.0880	1.5
		Average CE FAB-2 TSS		1.5
6. OWW	50	0.1362	0.0884	956
7. OWW	50	0.1360	0.0882	956
		Average OWW TSS		956
8.				
9.				
		Average TSS		

Comments: _____

Calculation: TSS, mg/L = $\frac{\text{(Gross Wt, mg - Tare Wt, mg) X 1000}}{\text{Volume of Sample, ml}}$

Note: NPDES permit: monthly avg. 23 mg/L, daily max. 61 mg/L.

Reference: 1. Standard Methods for the Examination of Water and Wastewater, 1998, 20th Edition, Section 2540 D, page 2-57.
2. National Pollution Discharge Elimination System Permit #101128.

TJR 21 Mar 1987
DEM 11 Jan 2000 Revised

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SCOEPA00023954

Analytical Data

Wacker Siltronic

Job Number: A20307BF

Lab Sample ID: A20307BF-2
Field ID: 02-22 OWW, Composite
Date/Time: 03/07/02 0830
Matrix: Water

EPA Category: Inorganic Chemicals

Parameter	Method	Detection Limit	Analytical Result	Units
Arsenic	EPA 200.8	0.05	ND	mg/L
Molybdenum	EPA 200.8	0.02	ND	mg/L

ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A20307BF

Lab Sample ID: A20307BF-3
Field ID: 02-23 OWW, Grab
Date/Time: 03/07/02 0830
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/13/02
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
Acetone	15.	ND	1400.
Benzene	5.	ND	ND
Bromobenzene	5.	ND	ND
Bromochloromethane	5.	ND	ND
Bromodichloromethane	5.	ND	ND
Bromoform	5.	ND	ND
Bromomethane	5.	ND	ND
2-Butanone (MEK)	5.	ND	ND
n-Butylbenzene	5.	ND	ND
sec-Butylbenzene	5.	ND	ND
tert-Butylbenzene	5.	ND	ND
Carbon Disulfide	5.	ND	ND
Carbon tetrachloride	5.	ND	ND
Chlorobenzene	5.	ND	ND
Chloroethane	5.	ND	ND
2-Chloroethylvinyl ether	5.	ND	ND
Chloroform	5.	ND	ND
Chloromethane	5.	ND	ND
2-Chlorotoluene	5.	ND	ND
4-Chlorotoluene	5.	ND	ND
1,2-Dibromo-3-chloropropane	5.	ND	ND
Dibromochloromethane	5.	ND	ND
1,2-Dibromoethane	5.	ND	ND
Dibromomethane	5.	ND	ND
1,2-Dichlorobenzene	5.	ND	ND
1,3-Dichlorobenzene	5.	ND	ND
1,4-Dichlorobenzene	5.	ND	ND
Dichlorodifluoromethane	5.	ND	ND
1,1-Dichloroethane	5.	ND	ND
1,2-Dichloroethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

Analytical Data

Wacker Siltronic

Job Number: A20307BF

Lab Sample ID: A20307BF-3
Field ID: 02-23 OWW, Grab
Date/Time: 03/07/02 0830
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/13/02
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,1-Dichloroethene	5.	ND	ND
cis-1,2-Dichloroethene	5.	ND	ND
trans-1,2-Dichloroethene	5.	ND	ND
1,2-Dichloropropane	5.	ND	ND
1,3-Dichloropropane	5.	ND	ND
2,2-Dichloropropane	5.	ND	ND
1,1-Dichloropropene	5.	ND	ND
cis-1,3-Dichloropropene	5.	ND	ND
trans-1,3-Dichloropropene	5.	ND	ND
Ethylbenzene	5.	ND	ND
Hexachlorobutadiene	5.	ND	ND
2-Hexanone	5.	ND	ND
Iodomethane	5.	ND	ND
Isopropylbenzene	5.	ND	ND
4-Isopropyltoluene	5.	ND	ND
4-Methyl-2-pentanone	5.	ND	ND
Methylene chloride	5.	ND	ND
Naphthalene	5.	ND	ND
n-Propylbenzene	5.	ND	ND
Styrene	5.	ND	ND
1,1,1,2-Tetrachloroethane	5.	ND	ND
1,1,2,2-Tetrachloroethane	5.	ND	ND
Tetrachloroethene	5.	ND	ND
Toluene	5.	ND	13.
1,2,3-Trichlorobenzene	5.	ND	ND
1,2,4-Trichlorobenzene	5.	ND	ND
1,1,1-Trichloroethane	5.	ND	ND
1,1,2-Trichloroethane	5.	ND	ND
Trichloroethene	5.	ND	ND
Trichlorofluoromethane	5.	ND	ND

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

Coffey Laboratories, Inc.
12423 N.E. Whitaker Way • Portland, OR • 97230 • (503) 254-1794 • FAX (503) 254-1452

SCOEPA00023957

Analytical Data

Wacker Siltronic

Job Number: A20307BF
Page Number: 6 of 13

Lab Sample ID: A20307BF-3
Field ID: 02-23 OWW, Grab
Date/Time: 03/07/02 0830
Matrix: Water

EPA Category: Volatile Organic Chemicals
Analysis Performed: EPA 8260; Volatile Organics by GC/MS.
Analysis Date: 03/13/02
Analyst: MRD

Parameter	Detection Limit	Laboratory Blank	Analytical Result
1,2,3-Trichloropropane	5.	ND	ND
1,2,4-Trimethylbenzene	5.	ND	ND
1,3,5-Trimethylbenzene	5.	ND	ND
Vinyl acetate	5.	ND	ND
Vinyl chloride	5.	ND	ND
m,p-Xylene	10.	ND	ND
o-Xylene	5.	ND	ND
4-Bromofluorobenzene (Surr.)	---	---	90%
Dibromofluoromethane (Surr.)	---	---	115%
Toluene-d8 (Surr.)	---	---	106%

Results expressed as µg/L unless otherwise noted.
ND means none detected at or above the detection limit listed.

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4640175004
SUSC WACKER SILTRONICS OWW & MV2
C. Justin Darr
243-2020 x7131

Wacker Siltronic Corporation
PO Box 83180
Portland, Oregon 97283-0180

SPECIAL ACCOUNT METER REPORT DOCUMENT

3/31/01

1. OWW DISCHARGE

ACTUAL READINGS

	FAB 1	FAB 2	
PAST READING	109367	(130,545)	(100s of GALLONS)
CURRENT READING	109367	56,774	(100s of GALLONS)
CONSUMPTION	0	187,319	(100s of GALLONS)
TOTAL THROUGH OVERFLOW LINE	0		(100s of GALLONS)
TOTAL CONSUMPTION	1,873,190	(10s of GALLONS)	

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	1,873,190	* 10 GAL / 7.48 GAL/CF =	2,504,265 CF
TOTAL THROUGH OVERFLOW LI	0	* 10 GAL / 7.48 GAL/CF =	0 CF
TOTAL CONSUMPTION			2,504,265 CF

2. METER VAULT #2 (Sanitary)

ACTUAL READINGS

PAST READING	8,297,470	(10s of GALLONS)
CURRENT READING	8,390,547	(10s of GALLONS)
CONSUMPTION	93,077	(10s of GALLONS)

READINGS CONVERTED TO CUBIC FEET

CONSUMPTION	93,077	* 10 GAL / 7.48 GAL/CF=	124,434 CF

This meter reading was reported by: Dianne Irish for C. Justin Darr Justin Darr on 4/11/02 date.

Sent to: Buereau of Enviromental Services City of Portland
Water Pollution Control Lab, Attn: Tim Dean
6543 N Burlington Avenue, Portland, Oregon 97203-5452

SCOEPA00023959