



MSD

*Louisville and Jefferson County Metropolitan Sewer District  
700 West Liberty Street  
Louisville Kentucky 40203-1911  
502-540-6000  
www.msdlouky.org*

March 20, 2007

Ms. Kathy Thurman  
Kentucky Division of Water  
14 Reilly Road  
Frankfort, Kentucky 40601

RE: Hite Creek Wastewater Treatment Plant, KPDES No: KY0022420  
Discharge Monitoring Report  
March 2007

Dear Ms. Thurman:

Attached are the Discharge Monitoring Report (DMR) and the Monthly Operating Report (MOR) report for the Hite Creek Wastewater Treatment Plant, for the month of March 2007.

Also included is the First quarter Metals / Biomonitoring report.

If you have any questions concerning the attached DMR's, please contact me at (502)241-9093.

Sincerely,

John Kessel  
Process Supervisor, East Region

JMK/ Hite Creek. 0307

Enclosures

cc: M. Mudd (DOW Louisville)  
E. Brady  
T. Singleton  
P. Burgin  
R. Shaw



*Beneficial Use of Louisville's Biosolids  
www.louisvillegreen.com*

NAME OF TREATMENT PLANT Hite CreekCOUNTY Jefferson

Month of:

Avg. Flow: 4.53

|      |          | Sludge Disposal |                                                           |
|------|----------|-----------------|-----------------------------------------------------------|
| Date | Rainfall | in Gallons      | Remarks                                                   |
| 1    | 1        | 63000           | Collected 1st Storm Runoff Samples                        |
| 2    |          | 94500           | ACCO INSTALLED NEW ROOF AIR CONDITION                     |
| 3    |          | 75600           |                                                           |
| 4    |          | 6300            |                                                           |
| 5    |          | 56700           | Fill Defoamer Tank                                        |
| 6    |          | 100800          | Collected 1st Bio-Monitor Samples                         |
| 7    |          | 81900           | Test Run Generators                                       |
| 8    |          | 69300           | Collected 2nd Bio-Monitor Samples                         |
| 9    |          | 63000           |                                                           |
| 10   |          | 37800           | Collected 3rd Bio-Monitor Samples                         |
| 11   |          | 12600           |                                                           |
| 12   |          | 63000           | Put Flow To #6 Aeration Tank                              |
| 13   | 0.43     | 37800           | Drain #1 G.F. Hose Down Walls Put Back In Service         |
| 14   | 1        | 56700           |                                                           |
| 15   | 0.33     | 88200           | Clean Drain Pan On Belt Conveyor. Rotate Grit Clarifiers. |
| 16   |          | 81900           |                                                           |
| 17   |          | 75600           |                                                           |
| 18   |          | 0               |                                                           |
| 19   | 0.55     | 37800           |                                                           |
| 20   |          | 100800          | Clean Strainers On Odor Control Units                     |
| 21   |          | 69300           |                                                           |
| 22   |          | 81900           | API Clean Scum Station Wetwell.                           |
| 23   | 0.23     | 37800           |                                                           |
| 24   |          | 0               |                                                           |
| 25   |          | 0               |                                                           |
| 26   |          | 56700           | Replaced Scrapper Blade On Belt Conveyor.                 |
| 27   |          | 31500           | Fill Sodium Aluminate Tank. 3000 Gals.                    |
| 28   | 0.58     | 63000           | Collected 2nd Storm Runoff Samples.                       |
| 29   |          | 56700           |                                                           |
| 30   |          | 44100           |                                                           |
| 31   | 0.13     | 0               |                                                           |

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME MSD HITE CREEK S/P  
ADDRESS C/O LOUISVILLE/JEFF CO MSD  
4522 ALDOUNGUIN PKWY  
LOUISVILLE KY 40211-2497  
FACILITY MSD HITE CREEK S/P  
LOCATION LOUISVILLE KY 40201  
ATTN: ALEX E NOVAK, OPER MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

KY0022420  
PERMIT NUMBER  
001 2  
DISCHARGE NUMBER

MAJOR  
(SUBR LV)  
F - FINAL  
MUNICIPAL WASTEWATER  
EFFLUENT

Form Approved  
OMB No. 2040-0004

JEFF

MONITORING PERIOD  
YEAR MO DAY TO YEAR MO DAY  
07 03 01 TO 07 03 31

\*\*\* NO DISCHARGE 1 \*\*\*

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           |        |                       |             |
| OXYGEN, DISSOLVED (DO)                 | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****    |              | 8.6                      | *****                                                        | *****    | ( 17 )          | 0      | 3/7                   | G.b         |
| 00300 1 0 0                            | PERMIT REQUIREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****    | *****        | INST MIN                 | *****                                                        | *****    | MG/L            |        | FREE/GRAB             | WEEK        |
| EFFLUENT GROSS VALUE                   | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****    |              | 7.9                      | *****                                                        | 8.3      | ( 12 )          | 0      | 3/7                   | G.b         |
| PH                                     | PERMIT REQUIREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****    | *****        | 5.0                      | *****                                                        | 9.0      | MINIMUM MAXIMUM |        | FREE/GRAB             | WEEK        |
| 00400 1 0 0                            | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****    | ( 26 )       | *****                    | 176.92                                                       | 191.33   | ( 19 )          | 0      | 3/7                   | Comp        |
| EFFLUENT GROSS VALUE                   | PERMIT REQUIREMENT | REPORT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | REPORT   | LBS/DY       | *****                    | REPORT                                                       | REPORT   | MG/L            |        | FREE/GRAB             | WEEK        |
| 00530 9 0 0                            | SAMPLE MEASUREMENT | 6686                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 7202     | ( 26 )       | *****                    | 7.33                                                         | 8.67     | ( 17 )          | 0      | 3/7                   | Comp        |
| RAW SEW INFLUENT                       | PERMIT REQUIREMENT | MO AVG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | MX WK AV | LBS/DY       | *****                    | MO AVG                                                       | MX WK AV | MG/L            |        | FREE/GRAB             | WEEK        |
| 00530 1 0 0                            | SAMPLE MEASUREMENT | 293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 387      | ( 26 )       | *****                    | 30                                                           | 45       | ( 17 )          | 0      | 3/7                   | Comp        |
| EFFLUENT GROSS VALUE                   | PERMIT REQUIREMENT | MO AVG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | MX WK AV | LBS/DY       | *****                    | MO AVG                                                       | MX WK AV | MG/L            |        | FREE/GRAB             | WEEK        |
| 00610 8 0 0                            | SAMPLE MEASUREMENT | 540                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 556      | ( 26 )       | *****                    | 14.48                                                        | 17.20    | ( 17 )          | 0      | 3/7                   | Comp        |
| RAW SEW INFLUENT                       | PERMIT REQUIREMENT | REPORT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | REPORT   | LBS/DY       | *****                    | REPORT                                                       | REPORT   | MG/L            |        | FREE/GRAB             | WEEK        |
| 00610 1 0 0                            | SAMPLE MEASUREMENT | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4        | ( 26 )       | *****                    | 0.10                                                         | 0.10     | ( 17 )          | 0      | 3/7                   | Comp        |
| EFFLUENT GROSS VALUE                   | PERMIT REQUIREMENT | MO AVG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | MX WK AV | LBS/DY       | *****                    | MO AVG                                                       | MX WK AV | MG/L            |        | FREE/GRAB             | WEEK        |
| 00610 1 0 0                            | SAMPLE MEASUREMENT | 4.53                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6.73     | ( 03 )       | *****                    | *****                                                        | *****    | *****           | 0      | 6/12                  | 6/12        |
| EFFLUENT GROSS VALUE                   | PERMIT REQUIREMENT | REPORT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | REPORT   | DAILY MX MGD | *****                    | *****                                                        | *****    | *****           |        | CONTINUOUS            | UDUS        |
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER |                    | I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. |          |              |                          | TELEPHONE                                                    |          | DATE            |        |                       |             |
| H. J. Schaefer<br>Exec. Director       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |              |                          | SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT |          | 1241-9653       |        | 07 04 20              |             |
| TYPED OR PRINTED                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |              |                          | AREA CODE                                                    | NUMBER   | YEAR            | MO     | DAY                   |             |

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

USE MO AVG FOR BOD/TSS REMV; REPT IN MINIMUM COLUMN.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: MSD HITE CREEK STP  
 ADDRESS: C/O LOUISVILLE/JEFF CO MSD  
 4522 ALGONQUIN PKWY  
 LOUISVILLE KY 40211-2477  
 FACILITY: MSD HITE CREEK STP  
 LOCATION: LOUISVILLE KY 40201  
 ATTN: ALEX E NOVAK, OPER MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

KY0022420  
 PERMIT NUMBER

001 2  
 DISCHARGE NUMBER

MAJOR  
 (SUBR LV)  
 F - FINAL  
 MUNICIPAL WASTEWATER  
 EFFLUENT

Form Approved.  
 OMB No. 2040-0004

| MONITORING PERIOD |    |     |    |      |    |     |
|-------------------|----|-----|----|------|----|-----|
| YEAR              | MO | DAY | TO | YEAR | MO | DAY |
| 07                | 03 | 01  |    | 07   | 03 | 01  |

\*\*\* NO DISCHARGE \*\*\*

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    |        |                       |             |
| COLIFORM, FECAL GENERAL                  | SAMPLE MEASUREMENT | *****               | *****    |        | *****                    | 3        | 3        | ( 13 )   | 0      | 3/7                   | Grab        |
| 74355 1 0 0                              | PERMIT REQUIREMENT | *****               | *****    | ****   | *****                    | 200      | 400      | */       |        | FREE/                 | BRAD        |
| EFFLUENT GROSS VALUE                     |                    |                     |          | ****   |                          | 30DA GED | 7 DA GED | 100ML    |        | WEEK                  |             |
| BOD, CARBONACEOUS 05 DAY, 20C            | SAMPLE MEASUREMENT | 6469                | 8129     | ( 25 ) | *****                    | 166.25   | 180.0    | ( 17 )   | 0      | 3/7                   | Comp        |
| 20082 0 0 0                              | PERMIT REQUIREMENT | REPORT              | REPORT   |        | *****                    | REPORT   | REPORT   |          |        | FREE/                 | UNPLD       |
| RAW SEW/INFLUENT                         |                    | MO AVG              | MX WK AV | LBS/DY |                          | MO AVG   | MX WK AV | MG/L     |        | WEEK                  |             |
| BOD, CARBONACEOUS 05 DAY, 20C            | SAMPLE MEASUREMENT | 134                 | 168      | ( 26 ) | *****                    | 3.42     | 4.33     | ( 17 )   | 0      | 3/7                   | Comp        |
| 20082 1 0 0                              | PERMIT REQUIREMENT | 367                 | 550      |        | *****                    | 10       | 15       |          |        | FREE/                 | UNPLD       |
| EFFLUENT GROSS VALUE                     |                    | MO AVG              | MX WK AV | LBS/DY |                          | MO AVG   | MX WK AV | MG/L     |        | WEEK                  |             |
| BOD, CARB-5 DAY, 20 DEG C, PERCENT REMVL | SAMPLE MEASUREMENT | *****               | *****    |        | 97.9%                    | *****    | *****    | ( 23 )   | 0      | 1/31                  | Cal         |
| 20091 0 0 0                              | PERMIT REQUIREMENT | *****               | *****    | ****   | 85                       | *****    | *****    | PER-CENT |        | WEEK                  | WALL TO     |
| PERCENT REMOVAL                          |                    |                     |          | ****   | MO AVG                   |          |          |          |        | MONTH                 |             |
| SOLIDS, SUSPENDED PERCENT REMOVAL        | SAMPLE MEASUREMENT | *****               | *****    |        | 95.7%                    | *****    | *****    | ( 23 )   | 0      | 1/31                  | Cal         |
| 21011 0 0 0                              | PERMIT REQUIREMENT | *****               | *****    | ****   | 85                       | *****    | *****    | PER-CENT |        | WEEK                  | WALL TO     |
| PERCENT REMOVAL                          |                    |                     |          | ****   | MO MIN                   |          |          |          |        | MONTH                 |             |
|                                          | SAMPLE MEASUREMENT |                     |          |        |                          |          |          |          |        |                       |             |
|                                          | PERMIT REQUIREMENT |                     |          |        |                          |          |          |          |        |                       |             |
|                                          | SAMPLE MEASUREMENT |                     |          |        |                          |          |          |          |        |                       |             |
|                                          | PERMIT REQUIREMENT |                     |          |        |                          |          |          |          |        |                       |             |

| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER | I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. | TELEPHONE |          | DATE |    |     |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|------|----|-----|
|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | AREA CODE | NUMBER   | YEAR | MO | DAY |
| H.S. Schaefer<br>Exce Director         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 502       | 241 9093 | 07   | 04 | 20  |

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
 USE MO AVG FOR BOD/TSS REMV; REPT IN MINIMUM COLUMN.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME KNOX HITE CREEK STP  
 ADDRESS 470 LOUISVILLE/JEFF CO MSD  
 4522 ALBONQUIN PKWY  
 LOUISVILLE KY 40211-2497  
 FACILITY MSD HITE CREEK STP  
 LOCATION LOUISVILLE KY 40201  
 ATTN: ALEX E NOVAK, OPER MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

KY0022420  
 PERMIT NUMBER  
 001 Y  
 DISCHARGE NUMBER

MAJOR  
 (SUBR LV)  
 F - FINAL  
 METALS/BIO-MONITORING/QUARTERLY  
 EFFLUENT  
 \*\*\* NO DISCHARGE \*\*\*

Form Approved.  
 OMB No. 2040-0004

MONITORING PERIOD  
 FROM YEAR MO DAY TO YEAR MO DAY  
 07 01 01 TO 07 03 01

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  |          |                       |             |
| HARDNESS, TOTAL<br>(AS CaCO3)<br>00900 1 0 0<br>EFFLUENT GROSS VALUE | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   |       | *****                    | 205           | 205             | ( 19 ) | 0        | 1/4                   | Compos      |
|                                                                      | PERMIT REQUIREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   | ***** | *****                    | REPORT MD AVG | REPORT DAILY MX | MG/L   |          | DAILY                 | Compos      |
| CADMIUM, DISSOLVED<br>(AS CD)<br>01025 1 0 0<br>EFFLUENT GROSS VALUE | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   |       | *****                    | <0.001        | <0.001          | ( 19 ) | 0        | 1/4                   | Compos      |
|                                                                      | PERMIT REQUIREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   | ***** | *****                    | REPORT MD AVG | REPORT DAILY MX | MG/L   |          | DAILY                 | Compos      |
| COPPER, DISSOLVED<br>(AS CU)<br>01040 1 0 0<br>EFFLUENT GROSS VALUE  | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   |       | *****                    | 0.009         | 0.009           | ( 19 ) | 0        | 1/4                   | Compos      |
|                                                                      | PERMIT REQUIREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   | ***** | *****                    | REPORT MD AVG | REPORT DAILY MX | MG/L   |          | DAILY                 | Compos      |
| LEAD, DISSOLVED<br>(AS PB)<br>01049 1 0 0<br>EFFLUENT GROSS VALUE    | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   |       | *****                    | <0.004        | <0.004          | ( 19 ) | 0        | 1/4                   | Compos      |
|                                                                      | PERMIT REQUIREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   | ***** | *****                    | REPORT MD AVG | REPORT DAILY MX | MG/L   |          | DAILY                 | Compos      |
| ZINC, DISSOLVED<br>(AS ZN)<br>01090 1 0 0<br>EFFLUENT GROSS VALUE    | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   |       | *****                    | 0.047         | 0.047           | ( 19 ) | 0        | 1/4                   | Compos      |
|                                                                      | PERMIT REQUIREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   | ***** | *****                    | REPORT MD AVG | REPORT DAILY MX | MG/L   |          | DAILY                 | Compos      |
| ZINC<br>TOTAL RECOVERABLE<br>01094 1 0 0<br>EFFLUENT GROSS VALUE     | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   |       | *****                    | 0.047         | 0.047           | ( 19 ) | 0        | 1/4                   | Compos      |
|                                                                      | PERMIT REQUIREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   | ***** | *****                    | REPORT MD AVG | REPORT DAILY MX | MG/L   |          | DAILY                 | Compos      |
| CADMIUM<br>TOTAL RECOVERABLE<br>01113 1 0 0<br>EFFLUENT GROSS VALUE  | SAMPLE MEASUREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   |       | *****                    | <0.001        | <0.001          | ( 19 ) | 0        | 1/4                   | Compos      |
|                                                                      | PERMIT REQUIREMENT | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | *****   | ***** | *****                    | REPORT MD AVG | REPORT DAILY MX | MG/L   |          | DAILY                 | Compos      |
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER                               |                    | I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. |         |       |                          |               | TELEPHONE       |        | DATE     |                       |             |
| B.D. Schandier<br>Exec. Director                                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |       |                          |               | 562 241-9093    |        | 07 04 23 |                       |             |
| TYPED OR PRINTED                                                     |                    | SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |       |                          |               | AREA CODE       | NUMBER | YEAR     | MO                    | DAY         |

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME MSD HITE CREEK STP  
 ADDRESS C/O LOUISVILLE/JEFF CO MSD  
 4522 ALGORGUIN PKWY  
 LOUISVILLE KY 40211-2477  
 FACILITY MSD HITE CREEK STP  
 LOCATION LOUISVILLE KY 40201  
 ATTN: ALEX E NUVAK, OPER MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

KY0022420  
 PERMIT NUMBER

001 Y  
 DISCHARGE NUMBER

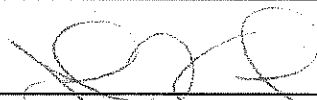
MAJOR (SUBR LV)  
 F - FINAL JEFFE  
 METALS/BIO-MONITORING/QUARTERLY  
 EFFLUENT  
 \*\*\* NO DISCHARGE \*\*\*

Form Approved.  
 OMB No. 2040-0004

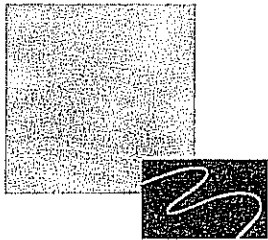
| MONITORING PERIOD |      |    |     |    |      |    |     |
|-------------------|------|----|-----|----|------|----|-----|
| FROM              | YEAR | MO | DAY | TO | YEAR | MO | DAY |
|                   | 07   | 01 | 01  |    | 07   | 06 | 01  |

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| PARAMETER             |                    | QUANTITY OR LOADING |         |       | QUALITY OR CONCENTRATION |         |                 |       | NO. EX | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|-----------------------|--------------------|---------------------|---------|-------|--------------------------|---------|-----------------|-------|--------|-----------------------|-------------|
|                       |                    | AVERAGE             | MAXIMUM | UNITS | MINIMUM                  | AVERAGE | MAXIMUM         | UNITS |        |                       |             |
| LEAD                  | SAMPLE MEASUREMENT | *****               | *****   |       | *****                    | <0.004  | <0.004          | (19)  | 0      | 1/91                  | Comp        |
| TOTAL RECOVERABLE     | PERMIT REQUIREMENT | *****               | *****   | ****  | *****                    | REPORT  | REPORT          |       |        | DAILY                 | COMPL       |
| 01114 1 0 0           |                    |                     |         | ****  |                          | MD AVG  | DAILY MX        | MG/L  |        |                       |             |
| EFFLUENT GROSS VALUE  |                    |                     |         |       |                          |         |                 |       |        |                       |             |
| COPPER                | SAMPLE MEASUREMENT | *****               | *****   |       | *****                    | 0.009   | <0.009          | (19)  | 0      | 1/91                  | Comp        |
| TOTAL RECOVERABLE     | PERMIT REQUIREMENT | *****               | *****   | ****  | *****                    | REPORT  | REPORT          |       |        | DAILY                 | COMPL       |
| 01117 1 0 0           |                    |                     |         | ****  |                          | MD AVG  | DAILY MX        | MG/L  |        |                       |             |
| EFFLUENT GROSS VALUE  |                    |                     |         |       |                          |         |                 |       |        |                       |             |
| TOXICITY, FINAL CONCL | SAMPLE MEASUREMENT | *****               | *****   |       | *****                    | *****   | <1.0            | (29)  | 0      | 1/91                  | Comp        |
| TOXICITY UNITS        | PERMIT REQUIREMENT | *****               | *****   | ****  | *****                    | *****   | 1.00 CHRONIC    |       |        | DAILY                 | COMPL       |
| 01406 1 0 0           |                    |                     |         | ****  |                          |         | DAILY MX TOXCTY |       |        |                       |             |
| EFFLUENT GROSS VALUE  |                    |                     |         |       |                          |         |                 |       |        |                       |             |
|                       | SAMPLE MEASUREMENT |                     |         |       |                          |         |                 |       |        |                       |             |
|                       | PERMIT REQUIREMENT |                     |         |       |                          |         |                 |       |        |                       |             |
|                       |                    |                     |         |       |                          |         |                 |       |        |                       |             |
|                       | SAMPLE MEASUREMENT |                     |         |       |                          |         |                 |       |        |                       |             |
|                       | PERMIT REQUIREMENT |                     |         |       |                          |         |                 |       |        |                       |             |
|                       |                    |                     |         |       |                          |         |                 |       |        |                       |             |
|                       | SAMPLE MEASUREMENT |                     |         |       |                          |         |                 |       |        |                       |             |
|                       | PERMIT REQUIREMENT |                     |         |       |                          |         |                 |       |        |                       |             |
|                       |                    |                     |         |       |                          |         |                 |       |        |                       |             |
|                       | SAMPLE MEASUREMENT |                     |         |       |                          |         |                 |       |        |                       |             |
|                       | PERMIT REQUIREMENT |                     |         |       |                          |         |                 |       |        |                       |             |
|                       |                    |                     |         |       |                          |         |                 |       |        |                       |             |

|                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                       |           |        |      |    |     |    |
|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------|------|----|-----|----|
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER<br>Herbert Schuchter<br>Exec. Director<br>TYPED OR PRINTED | I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. | <br>SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT | TELEPHONE | DATE   |      |    |     |    |
|                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                       | AREA CODE | NUMBER | YEAR | MO | DAY |    |
|                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                       | 502       | 241    | 9093 | 07 | 04  | 23 |

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)



**Chronic Toxicity Evaluation  
for the  
MSD - Hite Creek  
Wastewater Treatment Plant**

**March 2007**

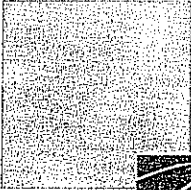
Prepared by:

Beckmar Environmental Laboratory  
Biomonitoring Department  
3251 Ruckriegel Parkway  
Louisville, KY. 40299  
(502) 266-6533

Submitted to:

Mr. Eric Brady  
Hite Creek Wastewater Treatment Plant  
700 West Liberty St.  
Louisville, KY. 40203

Released by: *Amanda L. Spalding*  
Biomonitoring QA Officer 4-17-07



## Summary

Chronic, definitive, toxicity testing was performed on final effluent samples collected March 5 through 10, 2007 from the MSD – Hite Creek Wastewater Treatment Plant. Testing was performed March 7 through 14, 2007 and upon termination, the following conclusions were reached:

For the 7-day *Ceriodaphnia dubia* survival and reproduction test run inside the CO2 chamber, the IC<sub>25</sub> for reproduction was greater than 100%, yielding less than 1.0 chronic toxicity units (TUC=100/IC<sub>25</sub>).

## Introduction

At the request of Mr. Eric Brady, chronic, definitive, toxicity testing was performed on 24 hour composite effluent samples collected March 5 through 10, 2007 from the MSD - Hite Creek Wastewater Treatment Plant in Louisville, KY. Metals analyses were also performed on effluent, influent, and mlss samples collected during this time period. Information concerning plant and laboratory conditions can be found on the following pages.

The chronic toxicity testing was performed in accordance with the US EPA methodology as defined in the US EPA manual "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" fourth edition, 2002 (EPA-821-R-02-013). The actual methods used were "Daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test Method 1002.0". The chronic toxicity test was performed in order to ascertain the IC<sub>25</sub> values for *Ceriodaphnia dubia* reproduction.



Date of Issue: March 20, 2007

Page 1 of 1

Metropolitan Sewer District c/o Mr. Eric Brady  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP: Biomonitoring metals - Day 1.

**BECKMAR CERTIFICATE OF ANALYSIS # 181341**

Sample Date: 3/6/2007

Sample Time: 8:15

Sampled by: Client

| Parameter      | Results | Units | Type | Method     | Analyzed<br>Date / Time | Analyst |
|----------------|---------|-------|------|------------|-------------------------|---------|
| Hardness       | 205     | mg/l  | C    | EPA 130.2  | 3/9/2007 16:00          | PJB     |
| Cadmium (TR)   | < 0.001 | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Cadmium (D)    | < 0.001 | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Copper (TR)    | 0.009   | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Copper (D)     | 0.009   | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Lead (TR)      | < 0.004 | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Lead (D)       | < 0.004 | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Zinc (TR)      | 0.047   | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Zinc (D)       | 0.047   | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Nickel (TR)    | 0.026   | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Nickel (D)     | 0.019   | mg/l  | C    | EPA 200.7  | 3/13/2007 14:00         | ALS     |
| Chromium , Hex | < 0.01  | mg/l  | G    | SM3500cr-d | 3/8/2007 8:00           | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

Hersantown Business Park

251 Ruckriegel Parkway

Hersantown, KY 40299

266-6533

X 502-266.6446



Date of Issue: March 20, 2007

Page 1 of 1

Metropolitan Sewer District c/o Mr. Gary Ettel  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP: Week composite.

**BECKMAR CERTIFICATE OF ANALYSIS # 181717**

Sample Date: 3/10/2007

Sample Time: 10:05

Sampled by: Rhonda Baker

| Parameter | Results  | Units | Type | Method    | Analyzed<br>Date / Time | Analyst |
|-----------|----------|-------|------|-----------|-------------------------|---------|
| Arsenic   | 0.0024   | mg/l  | C    | SM3113b   | 3/13/2007 12:50         | ALS     |
| Barium    | 0.006    | mg/l  | C    | EPA 200.7 | 3/14/2007 7:45          | ALS     |
| Cadmium   | < 0.001  | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |
| Iron      | 0.043    | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |
| Lead      | 0.014    | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |
| Mercury   | < 0.0005 | mg/l  | C    | EPA 245.1 | 3/14/2007 12:00         | ALS     |
| Selenium  | < 0.0005 | mg/l  | C    | SM3113b   | 3/13/2007 15:00         | ALS     |
| Silver    | < 0.001  | mg/l  | C    | EPA 200.7 | 3/14/2007 7:45          | ALS     |
| Zinc      | 0.0765   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

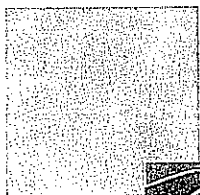
Jeffersontown Business Park

251 Ruckriegel Parkway

Jeffersontown, KY 40299

502.266.6533

FAX: 502.266.6446



Test Type: Acute \_\_\_\_\_ Screen \_\_\_\_\_  
Chronic X Definitive X

### TOXICITY TEST REPORT SHEET

- 1) Facility/Discharger: Hite Creek WWTP  
Report Date: 4/17/2007
- 2) Address: 5512 Hitt Ln. Louisville, KY. 40201
- 3) NPDES Permit #: KY0022420 4) Receiving Stream: Hite Creek - mile point 1.9
- 5) Facility Contact: Mr. Eric Brady 6) Phone #: (502) 241-9310
- 7) Consultant/Testing Lab Name: Beckmar Environmental Laboratory
- 8) Lab Contact: Becky Barker Phone #: (502) 266-6533
- 9) Outfall(s) Tested: 1
- 10) Average Daily flow on day sampled (MGD) 1) 4.42 2) 4.24  
3) 4 4) 4 5) 4 6) 4 7) 4
- 11) Test Species: 1) Ceriodaphnia dubia 2) \_\_\_\_\_
- 12) Species Age: 1) 12.5-18.5 hours 2) \_\_\_\_\_
- 13) Organism Source: 1) brood board 030607 2) \_\_\_\_\_
- 14) Acclimation Procedures: 1) Reared at test conditions in synthetic water  
2) \_\_\_\_\_
- 15) Test Conditions: Static: \_\_\_\_\_ Static-Renewal: X
- 16) Dilution Water Type (Synthetic, Receiving Stream) synthetic - mhs
- 17) Aeration? (Before Test/During Test/None): no
- 18) Dechlorination? no Original Chlorine Level: <0.01 m

Rhonda Baker

(Signature of person filling out form)

Rhonda Baker

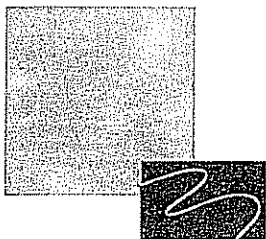
Name (Typed or Printed)

4/17/2007

Date

Biologist

Title



## Materials and Methods

### Sampling

Composite effluent samples were collected once every other 24 hours (Table I) and delivered to Beckmar Environmental Laboratory. Upon receipt, each sample went through standard log in procedures.

### Control/Dilution Water

All chemicals used are reagent grade, obtained from Aldrich. 1.20 grams of  $\text{CaSO}_4$ , 1.2 grams of  $\text{MgSO}_4$ , 1.92 grams of  $\text{NaHCO}_3$ , and 0.080 grams of  $\text{KCl}$  were dissolved in distilled water provided by a Barnstead Thermolyne distillation system and aerated for a minimum of 24 hours.

### Test Containers

*C. dubia* tests were performed in 1 ounce plastic cups obtained from Plastics Inc. (St. Paul, MN).

### Toxicity Testing

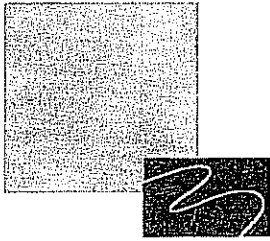
Samples were allowed to warm to room temperature ( $25^\circ\text{C}$ ) and were tested for residual chlorine immediately prior to dilution. Testing was then performed in accordance with US EPA methodology. Data was recorded on Beckmar generated lab sheets (Appendix I).

### Chemical Analysis

All test dilutions as well as control/dilution water were tested to determine initial dissolved oxygen, temperature, and pH. At the end of 24 hours, the control/dilution water and test dilutions were again tested to determine final dissolved oxygen, temperature and pH. Also, specific conductance, hardness, and alkalinity analyses were performed on the initial control/dilution water and 100% effluent samples. Data was recorded on Beckmar generated lab sheet (Appendix I).

### Statistical Analysis

Statistical data was generated using ToxCalc 5.0<sup>®</sup> (Tidepool Scientific software, McKinleyville, CA) and ToxStat<sup>®</sup> (USEPA, Cincinnati, OH) on a Pentium IV<sup>®</sup>, computer using Windows 98<sup>®</sup> Operating System.



### Additional Toxicity Test Information

- 1) Submit copies of all bench sheets and statistical calculations/printouts obtained during the test(s). Data must be presented in tabular form and must include all physical and/or chemical measurements recorded during the test (e.g. temperature, conductivity, total residual chlorine, dissolved oxygen, etc.).
- 2) Methods/Instrumentation used in chemical analysis:

|                               |                                       |
|-------------------------------|---------------------------------------|
| Dissolved Oxygen/temperature: | YSI Model 52                          |
| PH:                           | Orion Model 720A                      |
| Conductivity:                 | Oakton CON 100 Series                 |
| Alkalinity:                   | Standard Methods Titration            |
| Hardness:                     | Standard Methods Titration            |
| Total Chlorine Residual:      | Fisher-Porter Titration               |
| EPA Acute/Chronic Manual:     | 4 <sup>th</sup> Chronic Edition, 2002 |
- 3) Indicate below any other relevant information that may aid in the evaluation of this report. Include any deviations from EPA methodology that was necessary for these tests as well as any sample manipulations that were performed, such as aeration, dechlorination with sodium thiosulfate, etc., and the justification for such manipulations or deviations. Attach additional pages as needed.
- 4) Sample temperature upon receipt may be greater than 4°C. Samples are picked up immediately after the 24 hours composite is completed. The sampler is cooled and the samples are refrigerated; however it may be impossible to rapidly drop the effluent to 4°C.
- 5) In an effort to hold test pH drift to 0.3 s.u., the *Ceriodaphnia dubia* test was conducted in a CO<sub>2</sub> chamber.

TABLE I  
Sampling Summary

| Outfall | Sample Type | Volume   | Collection Period    |                        | Rainfall | Sample Temp   |
|---------|-------------|----------|----------------------|------------------------|----------|---------------|
| 1       | Composite   | 1 gallon | 03/05/07 @ 8:00 a.m. | = 03/06/07 @ 8:00 a.m. | 0        | 3.0 degrees C |
|         | Composite   | 1 gallon | 03/07/07 @ 7:30 a.m. | = 03/08/07 @ 7:30 a.m. | 0        | 4.0 degrees c |
|         | Composite   | 1 gallon | 03/09/07 @ 7:30 a.m. | = 03/10/07 @ 7:30 a.m. | 0        | 4.0 degrees c |

### Dates/Times of Test Performance

Species #1: *Ceriodaphnia dubia*

Initiated: 03/07/07 @ 9:30 A.M.

Renewed Daily @ 9:30 A.M.

Terminated 03/14/07 @ 9:30 A.M.

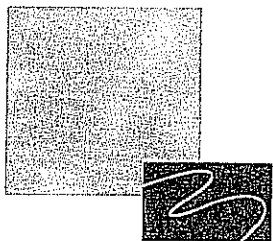
## Results

*Ceriodaphnia dubia* exhibited 90% survival in the control, 100% survival in the 20% dilution, 90% survival in the 40% dilution, 100% survival in the 60% dilution, 100% survival in the 80% dilution, and 100% survival in the 100% dilution with reproduction occurring in all of the dilutions (Table II).

For the 7-day *Ceriodaphnia dubia* survival and reproduction test run inside the CO<sub>2</sub> chamber, the IC<sub>25</sub> for reproduction was greater than 100%, generating a chronic toxicity value of less than 1.0 TUc.

Table II: *Ceriodaphnia dubia* Reproduction Results

| <u>C</u>   | <u>20%</u> | <u>40%</u> | <u>60%</u> | <u>80%</u> | <u>100%</u> |
|------------|------------|------------|------------|------------|-------------|
| 21         | 18         | 24         | 24         | 29         | 28          |
| 25         | 22         | 32         | 27         | 29         | 31          |
| 25         | 27         | 24         | 28         | 28         | 29          |
| 23         | 25         | 24         | 27         | 28         | 29          |
| 19         | 23         | 26         | 25         | 27         | 30          |
| 23         | 24         | 23         | 25         | 26         | 30          |
| 24         | 29         | 22         | 25         | 31         | 26          |
| 22         | 22         | 25         | 23         | 25         | 25          |
| 19         | 25         | 15         | 22         | 24         | 26          |
| 0          | 21         | 23         | 30         | 25         | 29          |
| <u>201</u> | <u>236</u> | <u>238</u> | <u>256</u> | <u>272</u> | <u>283</u>  |



# Appendix I

## *Ceriodaphnia dubia* Data Sheets

# **Ceriodaphnia Survival and Reproduction Test-Reproduction**

Start Date: 3/7/2007      Test ID: hc0307      Sample ID: hc0307  
 End Date: 3/14/2007      Lab ID: 0044:beckmar environmental      Sample Type: EFF1-POTW  
 Sample Date: 3/6/2007      Protocol: EPAF 94-EPA Freshwater      Test Species: CD-Ceriodaphnia dubia  
 Comments: hite creek cerio chronic march 2007

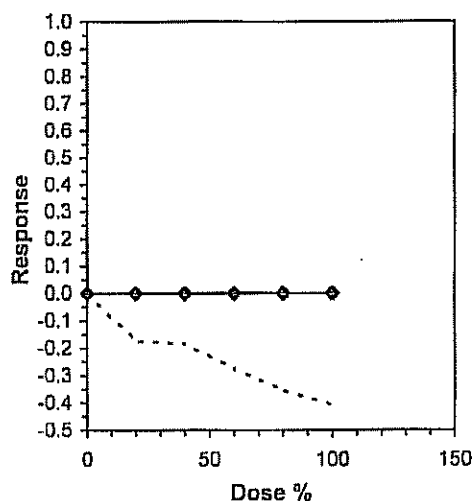
| Conc-%    | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| B-Control | 21.000 | 25.000 | 25.000 | 23.000 | 19.000 | 23.000 | 24.000 | 22.000 | 19.000 | 0.000  |
| 20        | 18.000 | 22.000 | 27.000 | 25.000 | 23.000 | 24.000 | 29.000 | 22.000 | 25.000 | 21.000 |
| 40        | 24.000 | 32.000 | 24.000 | 24.000 | 26.000 | 23.000 | 22.000 | 25.000 | 15.000 | 23.000 |
| 60        | 24.000 | 27.000 | 28.000 | 27.000 | 25.000 | 25.000 | 25.000 | 23.000 | 22.000 | 30.000 |
| 80        | 29.000 | 29.000 | 28.000 | 28.000 | 27.000 | 26.000 | 31.000 | 25.000 | 24.000 | 25.000 |
| 100       | 28.000 | 31.000 | 29.000 | 29.000 | 30.000 | 30.000 | 26.000 | 25.000 | 26.000 | 29.000 |

| Conc-%    | Transform: Untransformed |        |        |        |        |        |    | Isotonic |        |
|-----------|--------------------------|--------|--------|--------|--------|--------|----|----------|--------|
|           | Mean                     | N-Mean | Mean   | Min    | Max    | CV%    | N  | Mean     | N-Mean |
| B-Control | 20.100                   | 1.0000 | 20.100 | 0.000  | 25.000 | 36.743 | 10 | 24.767   | 1.0000 |
| 20        | 23.600                   | 1.1741 | 23.600 | 18.000 | 29.000 | 13.280 | 10 | 24.767   | 1.0000 |
| 40        | 23.800                   | 1.1841 | 23.800 | 15.000 | 32.000 | 17.471 | 10 | 24.767   | 1.0000 |
| 60        | 25.600                   | 1.2736 | 25.600 | 22.000 | 30.000 | 9.426  | 10 | 24.767   | 1.0000 |
| 80        | 27.200                   | 1.3532 | 27.200 | 24.000 | 31.000 | 8.092  | 10 | 24.767   | 1.0000 |
| 100       | 28.300                   | 1.4080 | 28.300 | 25.000 | 31.000 | 7.077  | 10 | 24.767   | 1.0000 |

| Auxiliary Tests                                                       | Statistic | Critical | Skew    | Kurt    |
|-----------------------------------------------------------------------|-----------|----------|---------|---------|
| Kolmogorov D Test indicates non-normal distribution ( $p \leq 0.01$ ) | 1.16749   | 1.035    | -2.4523 | 12.3624 |
| Bartlett's Test indicates unequal variances ( $p = 2.07E-04$ )        | 24.1046   | 15.0863  |         |         |

## Linear Interpolation (200 Resamples)

| Point | %    | SD | 95% CL | Skew |
|-------|------|----|--------|------|
| IC05  | >100 |    |        |      |
| IC10  | >100 |    |        |      |
| IC15  | >100 |    |        |      |
| IC20  | >100 |    |        |      |
| IC25  | >100 |    |        |      |
| IC40  | >100 |    |        |      |
| IC50  | >100 |    |        |      |



Grab #     

# Toxicity Test Results

Results of *Ceriodaphnia dubia* 7 day chronic definitive  
 (Genus) (Species) (Type / Duration)

Toxicity Test

Conducted: 03/07/07 -- 03/14/07 Using Effluent from Outfall # 1  
 (mm/dd/yy) (mm/dd/yy)

| Test Solution                                                                                                                                                                | Percent Survival<br>(time intervals used:- DAY) |     |     |     |     |     |     |                                                                                                                                                                                        | # of Young |      | Dry Weight |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------|------------|------|
|                                                                                                                                                                              | 1                                               | 2   | 3   | 4   | 5   | 6   | 7   | 8                                                                                                                                                                                      | Total      | Mean | Total      | Mean |
| Control                                                                                                                                                                      | 100                                             | 90  | 90  | 90  | 90  | 90  | 90  |                                                                                                                                                                                        | 201        | 20.1 |            |      |
| 20% Effluent                                                                                                                                                                 | 100                                             | 100 | 100 | 100 | 100 | 100 | 100 |                                                                                                                                                                                        | 236        | 23.6 |            |      |
| 40% Effluent                                                                                                                                                                 | 100                                             | 100 | 100 | 100 | 100 | 100 | 90  |                                                                                                                                                                                        | 238        | 23.8 |            |      |
| 60% Effluent                                                                                                                                                                 | 100                                             | 100 | 100 | 100 | 100 | 100 | 100 |                                                                                                                                                                                        | 256        | 25.6 |            |      |
| 80% Effluent                                                                                                                                                                 | 100                                             | 100 | 100 | 100 | 100 | 100 | 100 |                                                                                                                                                                                        | 272        | 27.2 |            |      |
| 100% Effluent                                                                                                                                                                | 100                                             | 100 | 100 | 100 | 100 | 100 | 100 |                                                                                                                                                                                        | 283        | 28.3 |            |      |
| LC <sub>50</sub> / IC <sub>25</sub> Value: <u>&gt; 100%</u><br><br>95% Confidence Limits<br><br>UL: <u>n/a</u><br>LL: <u>n/a</u><br><br>UL = Upper Limit<br>LL = Lower Limit |                                                 |     |     |     |     |     |     | Calculated TU Estimate * <u>&lt; 1.0 TU<sub>c</sub></u><br>(indicate Acute / Chronic)<br><br>Permit Limits: <u>1.0 TU<sub>c</sub></u><br>(Indicate TU <sub>a</sub> / TU <sub>c</sub> ) |            |      |            |      |
|                                                                                                                                                                              |                                                 |     |     |     |     |     |     | If acute test, method used to determine<br>LC50 and Confidence Limit Valued: <u>        </u>                                                                                           |            |      |            |      |

Note: TU<sub>a</sub> = 100/LC<sub>50</sub>; TU<sub>c</sub> = 100/IC<sub>25</sub>

## Reference Toxicant Test Results

| Species                   | Date     | Time      | Duration      | Toxicant    | Results (LC <sub>50</sub> / IC <sub>25</sub> ) |
|---------------------------|----------|-----------|---------------|-------------|------------------------------------------------|
| <i>Ceriodaphnia dubia</i> | 02/13/07 | 2:30 P.M. | <u>7 days</u> | <u>NaCl</u> | <u>IC25=0.8589g/l</u>                          |

Client: Hite CreekAnalyst: B. Becker, R. BakerTest Start -- Date/Time: 3-7-07 9:300.M.Test Stop -- Date/Time: 2-14-07 9:300.M.Brood Board Batch: 030607Neonate Age: 12.5-18.5 hrsData form for *Ceriodaphnia dubia* survival and reproduction test

| Control | Replicate |    |    |    |    |    |    |    |    |    | No. Of Young | No. Of Adults | Analyst |
|---------|-----------|----|----|----|----|----|----|----|----|----|--------------|---------------|---------|
|         | Day       | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10           |               |         |
|         | 1         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0            |               | BB      |
|         | 2         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | X            |               | BB      |
|         | 3         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | X            |               | BB      |
|         | 4         | 5  | 4  | 5  | 5  | 5  | 4  | 5  | 4  | 4  | 7            | 41            | BB      |
|         | 5         | 0  | 0  | 1  | 0  | 0  | 9  | 0  | 8  | 7  | X            | 25            | BB      |
|         | 6         | 8  | 10 | 9  | 9  | 13 | 0  | 9  | 0  | 0  | X            | 58            | BB      |
|         | 7         | 8  | 11 | 10 | 9  | 1  | 10 | 10 | 10 | 8  | X            | 77            | BB      |
|         | 8         |    |    |    |    |    |    |    |    |    |              |               |         |
|         | Total     | 21 | 25 | 25 | 25 | 19 | 23 | 24 | 22 | 19 | X            | 201           | BB      |

1 brood  
separated

(N/N)

| Conc. | Replicate |    |    |    |    |    |     |    |    |    | No. Of Young | No. Of Adults | Analyst |
|-------|-----------|----|----|----|----|----|-----|----|----|----|--------------|---------------|---------|
|       | Day       | 1  | 2  | 3  | 4  | 5  | 6   | 7  | 8  | 9  | 10           |               |         |
|       | 1         | 0  | 0  | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0            |               | BB      |
|       | 2         | 0  | 0  | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0            |               | BB      |
|       | 3         | 0  | 0  | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0            |               | BB      |
|       | 4         | 4  | 6  | 6  | 5  | 5  | 5   | 5  | 5  | 5  | (3)          | 49            | BB      |
|       | 5         | 9  | 0  | 0  | 0  | 0  | (4) | 0  | 9  | 0  | (1)          | 26            | BB      |
|       | 6         | 0  | 8  | 12 | 9  | 9  | (3) | 10 | 0  | 9  | 8            | 68            | BB      |
|       | 7         | 5  | 8  | 9  | 11 | 9  | 9   | 14 | 8  | 11 | 9            | 93            | BB      |
|       | 8         |    |    |    |    |    |     |    |    |    |              |               |         |
|       | Total     | 18 | 22 | 27 | 25 | 23 | 24  | 29 | 22 | 25 | 21           | 236           | BB      |

20%

| Conc. | Replicate |    |    |    |    |    |    |    |    |     | No. Of Young | No. Of Adults | Analyst |
|-------|-----------|----|----|----|----|----|----|----|----|-----|--------------|---------------|---------|
|       | Day       | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9   | 10           |               |         |
|       | 1         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0            |               | BB      |
|       | 2         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0            |               | BB      |
|       | 3         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0            |               | BB      |
|       | 4         | 4  | 6  | 4  | 4  | 6  | 6  | 5  | 0  | (4) | 5            | 44            | BB      |
|       | 5         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 6  | (1) | (8)          | 15            | BB      |
|       | 6         | 10 | 13 | 11 | 11 | 10 | 10 | 10 | 11 | 0   | (1)          | 42 87         | BB      |
|       | 7         | 10 | 13 | 9  | 9  | 10 | 7  | 7  | 8  | 10  | X 9          | 92            | BB      |
|       | 8         |    |    |    |    |    |    |    |    |     |              |               |         |
|       | Total     | 24 | 32 | 24 | 24 | 26 | 23 | 22 | 25 | 15  | 23           | 238           | BB      |

40%

Client: Hite CreekAnalyst: B. Benken, B. BenkenTest Start -- Date/Time: 3-7-07 9:30amTest Stop -- Date/Time: 3-14-07 9:30amData form for *Ceriodaphnia dubia* survival and reproduction test

| Conc. | Replicate |     |    |    |    |     |    |    |     |    |    | No. Of<br>Young | No. Of<br>Adults | Analyst |
|-------|-----------|-----|----|----|----|-----|----|----|-----|----|----|-----------------|------------------|---------|
|       | Day       | 1   | 2  | 3  | 4  | 5   | 6  | 7  | 8   | 9  | 10 |                 |                  |         |
| 60%   | 1         | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0   | 0  | 0  | 0               |                  | BB      |
|       | 2         | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0   | 0  | 0  | 0               |                  | BB      |
|       | 3         | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0   | 0  | 0  | 0               |                  | BB      |
|       | 4         | 5   | 5  | 6  | 5  | 6   | 3  | 6  | 4   | 5  | 0  | 45              |                  | BB      |
|       | 5         | (7) | 0  | 0  | 0  | (8) | 0  | 0  | (4) | 0  | 7  | 26              |                  | BB      |
|       | 6         | (1) | 11 | 12 | 10 | (2) | 10 | 10 | (4) | 8  | 12 | 80              |                  | BB      |
|       | 7         | 11  | 11 | 10 | 12 | 9   | 12 | 9  | 11  | 9  | 11 | 105             |                  | BB      |
|       | 8         |     |    |    |    |     |    |    |     |    |    |                 |                  |         |
|       | Total     | 24  | 27 | 28 | 27 | 25  | 25 | 25 | 23  | 22 | 30 | 256             |                  | BB      |

| Conc. | Replicate |    |    |    |     |    |    |    |    |    |    | No. Of<br>Young | No. Of<br>Adults | Analyst |
|-------|-----------|----|----|----|-----|----|----|----|----|----|----|-----------------|------------------|---------|
|       | Day       | 1  | 2  | 3  | 4   | 5  | 6  | 7  | 8  | 9  | 10 |                 |                  |         |
| 50%   | 1         | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0               |                  | BB      |
|       | 2         | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0               |                  | BB      |
|       | 3         | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0               |                  | BB      |
|       | 4         | 6  | 6  | 6  | 4   | 5  | 5  | 6  | 0  | 4  | 5  | 47              |                  | BB      |
|       | 5         | 0  | 0  | 0  | (7) | 0  | 10 | 0  | 6  | 7  | 10 | 40              |                  | BB      |
|       | 6         | 9  | 12 | 11 | (4) | 11 | 0  | 11 | 10 | 0  | 0  | 68              |                  | BB      |
|       | 7         | 14 | 11 | 11 | 13  | 11 | 11 | 14 | 9  | 13 | 10 | 117             |                  | BB      |
|       | 8         |    |    |    |     |    |    |    |    |    |    |                 |                  |         |
|       | Total     | 29 | 29 | 28 | 28  | 27 | 26 | 31 | 25 | 24 | 25 | 272             |                  | BB      |

| Conc. | Replicate |    |    |    |    |    |    |    |    |    |     | No. Of<br>Young | No. Of<br>Adults | Analyst |
|-------|-----------|----|----|----|----|----|----|----|----|----|-----|-----------------|------------------|---------|
|       | Day       | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  |                 |                  |         |
| 100%  | 1         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0               |                  | BB      |
|       | 2         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0               |                  | BB      |
|       | 3         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0               |                  | BB      |
|       | 4         | 6  | 6  | 6  | 6  | 6  | 6  | 5  | 4  | 5  | (5) | 55              |                  | BB      |
|       | 5         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 9  | (2) | 11              |                  | BB      |
|       | 6         | 11 | 13 | 11 | 11 | 11 | 11 | 10 | 10 | 0  | 9   | 97              |                  | BB      |
|       | 7         | 11 | 12 | 12 | 12 | 13 | 13 | 11 | 11 | 12 | 13  | 120             |                  | BB      |
|       | 8         |    |    |    |    |    |    |    |    |    |     |                 |                  |         |
|       | Total     | 28 | 31 | 29 | 29 | 30 | 30 | 26 | 25 | 26 | 29  | 283             |                  | BB      |

O = daphnid Alive, no reproduction  
# = number of neonates released

X = Daphnid dead  
X# = Daphnid dead but (#) of neonates released

ND = near death

Data form for the *Ceriodaphnia dubia* survival and reproduction test.  
Routine chemical and physical determinations.

Page 1 of 2

Client: HITE CREEK  
Test Start: 3-7-07 9:30 A  
Test Stop: 3-14-07 9:30 A

Analyst: B. Backer  
Analyst: B. Backer  
Analyst: B. Backer

| Control:             | Day   |       |       |       |       |       |       | Remarks |
|----------------------|-------|-------|-------|-------|-------|-------|-------|---------|
|                      | 1     | 2     | 3     | 4     | 5     | 6     | 7     |         |
| Temp. Initial        | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 24.8  |         |
| Degree C. Final      | 24.0  | 25.0  | 24.0  | 24.1  | 24.0  | 24.2  | 24.4  |         |
| D. O. Initial        | 7.8   | 7.7   | 8.1   | 8.0   | 8.0   | 8.0   | 8.1   |         |
| mg/l Final           | 8.9   | 8.1   | 8.5   | 8.9   | 9.0   | 8.8   | 8.4   |         |
| pH Initial           | 8.03  | 8.14  | 8.07  | 8.18  | 8.05  | 8.01  | 8.00  |         |
| S.U. Final           | 7.80  | 7.73  | 7.66  | 7.47  | 7.77  | 6.89  | 7.30  |         |
| Alkalinity (mg/l)    | 108.8 | 115.6 | 108.8 | 129.6 | 80.4  | 74.8  | 85.2  |         |
| Hardness (mg/l)      | 133.5 | 128.3 | 119.6 | 136.9 | 103.5 | 100.1 | 105.8 |         |
| Conductivity (µmhos) | 423   | 433   | 449   | 457   | 362   | 336   | 362   |         |
| Chlorine (mg/l)      | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |         |
| Analyst (init.)      | BB/MB | MB    | MB    | MB/MB | MB/MB | MB/MB | MB/MB |         |

| Conc. <u>20%</u> | Day   |      |      |       |      |      |      | Remarks |
|------------------|-------|------|------|-------|------|------|------|---------|
|                  | 1     | 2    | 3    | 4     | 5    | 6    | 7    |         |
| Temp. Initial    | 24.0  | 24.0 | 24.0 | 24.0  | 24.0 | 24.0 | 24.0 |         |
| Degree C. Final  | 24.0  | 24.6 | 24.0 | 24.1  | 24.0 | 24.2 | 24.4 |         |
| D. O. Initial    | 7.9   | 8.3  | 8.4  | 8.5   | 8.2  | 8.3  | 8.2  |         |
| mg/l Final       | 9.6   | 7.9  | 8.9  | 9.0   | 9.3  | 8.8  | 8.5  |         |
| pH Initial       | 7.87  | 7.97 | 7.85 | 7.89  | 7.91 | 7.82 | 7.89 |         |
| S.U. Final       | 8.08  | 7.74 | 7.73 | 7.48  | 7.92 | 7.09 | 7.34 |         |
| Analyst (init.)  | MB/MB | MB   | MB   | MB/MB | MB   | MB   | MB   |         |

| Conc. <u>40%</u> | Day   |      |      |       |      |      |      | Remarks |
|------------------|-------|------|------|-------|------|------|------|---------|
|                  | 1     | 2    | 3    | 4     | 5    | 6    | 7    |         |
| Temp. Initial    | 24.0  | 25.7 | 24.0 | 24.6  | 24.1 | 24.0 | 24.8 |         |
| Degree C. Final  | 24.0  | 24.1 | 24.0 | 24.1  | 24.0 | 24.2 | 24.4 |         |
| D. O. Initial    | 7.9   | 8.7  | 8.9  | 9.0   | 8.5  | 8.5  | 8.2  |         |
| mg/l Final       | 9.6   | 8.6  | 9.1  | 9.0   | 9.2  | 8.9  | 8.5  |         |
| pH Initial       | 7.73  | 7.77 | 7.65 | 7.69  | 7.77 | 7.65 | 7.77 |         |
| S.U. Final       | 7.92  | 7.83 | 7.88 | 7.49  | 7.92 | 7.13 | 7.33 |         |
| Analyst (init.)  | MB/MB | MB   | MB   | MB/MB | MB   | MB   | MB   |         |

Data form for the *Ceriodaphnia dubia* survival and reproduction test.  
Routine chemical and physical determinations.

Page 2 of 2



Client: HITE CREEK  
Test Start: 3-7-07 9:30 A  
Test Stop: 3-14-07 9:30 A

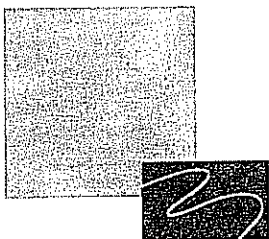
Analyst: B. Baker  
Analyst: R. Baker  
Analyst: \_\_\_\_\_

| Conc. <u>60%</u> |         | Day  |      |      |      |      |      |      | Remarks |
|------------------|---------|------|------|------|------|------|------|------|---------|
|                  |         | 1    | 2    | 3    | 4    | 5    | 6    | 7    |         |
| Temp. Degree C.  | Initial | 24.0 | 26.0 | 24.0 | 25.6 | 24.1 | 24.0 | 24.8 |         |
|                  | Final   | 24.0 | 24.0 | 24.0 | 24.1 | 24.0 | 24.2 | 24.4 |         |
| D. O. mg/l       | Initial | 8.1  | 9.1  | 9.5  | 9.3  | 8.6  | 8.6  | 8.3  |         |
|                  | Final   | 8.9  | 8.3  | 8.9  | 8.8  | 9.1  | 8.8  | 8.5  |         |
| pH S.U.          | Initial | 7.61 | 7.62 | 7.46 | 7.54 | 7.63 | 7.53 | 7.70 |         |
|                  | Final   | 7.97 | 7.93 | 7.82 | 7.50 | 7.77 | 7.17 | 7.32 |         |
| Analyst (init.)  |         | m/m  | m    | m    | m    | m    | m    | m    |         |

| Conc. <u>80%</u> |         | Day  |      |      |      |      |      |      | Remarks |
|------------------|---------|------|------|------|------|------|------|------|---------|
|                  |         | 1    | 2    | 3    | 4    | 5    | 6    | 7    |         |
| Temp. Degree C.  | Initial | 24.0 | 26.0 | 24.0 | 26.0 | 24.1 | 24.0 | 24.8 |         |
|                  | Final   | 24.0 | 24.0 | 24.0 | 24.1 | 24.0 | 24.2 | 24.5 |         |
| D. O. mg/l       | Initial | 7.9  | 9.2  | 9.7  | 9.6  | 8.6  | 8.7  | 8.3  |         |
|                  | Final   | 9.1  | 8.4  | 8.7  | 8.7  | 8.9  | 8.8  | 8.4  |         |
| pH S.U.          | Initial | 7.51 | 7.50 | 7.38 | 7.44 | 7.51 | 7.45 | 7.65 |         |
|                  | Final   | 7.91 | 7.85 | 7.93 | 7.48 | 7.70 | 7.13 | 7.30 |         |
| Analyst (init.)  |         | m/m  | m    | m    | m    | m    | m    | m    |         |

| Conc. <u>100%</u>    |         | Day   |       |       |       |       |       |       | Remarks |
|----------------------|---------|-------|-------|-------|-------|-------|-------|-------|---------|
|                      |         | 1     | 2     | 3     | 4     | 5     | 6     | 7     |         |
| Temp. Degree C.      | Initial | 24.0  | 26.0  | 24.0  | 26.0  | 24.1  | 24.0  | 24.8  |         |
|                      | Final   | 24.0  | 24.0  | 24.0  | 24.1  | 24.0  | 24.2  | 24.4  |         |
| D. O. mg/l           | Initial | 8.4   | 9.9   | 9.9   | 10.0  | 8.8   | 8.9   | 8.4   |         |
|                      | Final   | 8.8   | 8.2   | 8.8   | 8.7   | 8.8   | 8.7   | 8.3   |         |
| pH S.U.              | Initial | 7.42  | 7.37  | 7.25  | 7.30  | 7.40  | 7.35  | 7.50  |         |
|                      | Final   | 7.83  | 7.79  | 7.76  | 7.47  | 7.59  | 7.12  | 7.24  |         |
| Alkalinity (mg/l)    |         | 204.8 | 182.4 | 202.4 | 198.8 | 170.4 | 183.2 | 176   |         |
| Hardness (mg/l)      |         | 231.8 | 204.1 | 189.4 | 186.8 | 172.5 | 197.3 | 188.7 |         |
| Conductivity (µmhos) |         | 777   | 823   | 840   | 809   | 833   | 838   | 844   |         |
| Chlorine (mg/l)      |         | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |         |
| Analyst (init.)      |         | m/m   | m     | m     | m     | m/m   | m/m   | m/m   |         |

Bachman Saybolt 181310 181340 181658 181658 181713 181713 181713



# **Appendix II**

## **Chain of Custody Data Sheets**

Cerchon IN + maly

NAME OF TREATMENT PLANT HILE CREEK

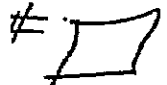
Bio-monitoring

TYPE OF SAMPLE: INFLUENT (COMPOSITE) X  
 SAMPLE DATE: 3-5-07 TO 3-6-07  
 EXPLAIN LOCATION: RAIL SEWAGE TREATMENT  
 NAME On TIME 8:15 VOL: mls 1000  
 NAME Auto Sample TIME 8:15 VOL: mls 1000  
 NAME Auto Sample TIME 8:15 VOL: mls 1000  
 NAME Auto Sample TIME 8:15 VOL: mls 1000  
 DELIVERED TO: H.C. LAB  
 DATE: 3-6-07 TIME: 8:15

TYPE OF SAMPLE: EFFLUENT (COMPOSITE)  
 SAMPLE DATE: 3-5-07 TO 3-6-07  
 EXPLAIN LOCATION: U-V SYSTEM DISCHARGE  
 NAME On TIME 8:15 VOL: mls 1000  
 NAME Auto Sample TIME 8:15 VOL: mls 1000  
 NAME Auto Sample TIME 8:15 VOL: mls 1000  
 NAME Auto Sample TIME 8:15 VOL: mls 1000  
 DELIVERED TO: H.C. LAB  
 DATE: 3-6-07 TIME: 8:15

TYPE OF SAMPE: EFF. NH<sub>3</sub>N (COMPOSITE)  
 SAMPLE DATE:  
 EXPLAIN LOCATION:  
 NAME TIME VOL: mls  
 NAME TIME VOL: mls  
 NAME TIME VOL: mls  
 NAME TIME VOL: mls  
 DELIVERED TO:  
 DATE: TIME:

TYPE OF SAMPLE: OTHER MIXED LIQUOR GRAB  
 SAMPLE DATE: 3-6-07  
 EXPLAIN LOCATION: #3 SPLITTER BOX  
 NAME On TIME 7:30 VOL: mls 1000  
 NAME TIME VOL: mls  
 NAME TIME VOL: mls  
 NAME TIME VOL: mls  
 NAME TIME VOL: mls  
 DELIVERED TO: H.C. LAB  
 DATE: 3-6-07 TIME: 8:15

E EFFLUENT GRAB (1000 mls)  
 7-DAYS DURING Bio-  
 ming EVENT   
 # 

TYPE OF SAMPLE: FECAL COLIFORM (GRAB)  
 SAMPLE DATE:  
 EXPLAIN LOCATION:  
 NAME TIME VOL: mls  
 DELIVERED TO:  
 DATE: TIME:

I have accepted the above sample:  
 NAME Michael B... DATE 3-6-07 TIME 11:46  
 and delivered to: See above DATE 3-6-07 TIME 12:25  
 I have accepted the above sample:  
 NAME DATE TIME  
 and delivered to: DATE TIME  
 I have accepted the above sample:  
 NAME DATE TIME  
 and delivered to: DATE TIME  
 I have accepted the above sample:  
 NAME DATE TIME

4.52 p10  
 3<sup>rd</sup> 6<sup>th</sup>  
 R F  
 0 4.42  
 0 4.24  
 0 4.00

181688

|                                                    |                  |                                                |                  |
|----------------------------------------------------|------------------|------------------------------------------------|------------------|
| NAME OF TREATMENT PLANT <u>Hill Creek</u>          |                  | Bio-monitoring                                 |                  |
| TYPE OF SAMPLE: INFLUENT (COMPOSITE) <u>X</u>      |                  | TYPE OF SAMPLE: EFFLUENT (COMPOSITE)           |                  |
| SAMPLE DATE: <u>3-7-07 to 3-8-07</u>               |                  | SAMPLE DATE: <u>3-7-07 to 3-8-07</u>           |                  |
| EXPLAIN LOCATION: <u>RAW SEWAGE TREATMENT</u>      |                  | EXPLAIN LOCATION: <u>U-V SYSTEM DISCHARGE</u>  |                  |
| NAME <u>Ch</u>                                     | TIME <u>7:30</u> | NAME <u>Ch</u>                                 | TIME <u>7:30</u> |
| VOL: <u>1000</u> mls                               |                  | VOL: <u>4000</u> mls                           |                  |
| NAME <u>Auto Sample Composite</u>                  | TIME             | NAME <u>Auto Sample Composite</u>              | TIME             |
| VOL: mls                                           |                  | VOL: mls                                       |                  |
| NAME <u>Auto Sample Composite</u>                  | TIME             | NAME <u>Auto Sample Composite</u>              | TIME             |
| VOL: mls                                           |                  | VOL: mls                                       |                  |
| NAME                                               | TIME             | NAME                                           | TIME             |
| VOL: mls                                           |                  | VOL: mls                                       |                  |
| DELIVERED TO: <u>H.C. LAB</u>                      |                  | DELIVERED TO: <u>H.C. LAB</u>                  |                  |
| DATE: <u>3-8-07</u> TIME: <u>7:40</u>              |                  | DATE: <u>3-8-07</u> TIME: <u>7:40</u>          |                  |
| TYPE OF SAMPLE: EFF. NH <sub>3</sub> N (COMPOSITE) |                  | TYPE OF SAMPLE: OTHER <u>Mixed Liquid Grab</u> |                  |
| SAMPLE DATE:                                       |                  | SAMPLE DATE: <u>3-8-07</u>                     |                  |
| EXPLAIN LOCATION:                                  |                  | EXPLAIN LOCATION: <u>#3 SPLITTER BOX</u>       |                  |
| NAME                                               | TIME             | NAME <u>E. O. N. N. I.</u>                     | TIME <u>7:00</u> |
| VOL: mls                                           |                  | VOL: <u>1000</u> mls                           |                  |
| NAME                                               | TIME             | NAME                                           | TIME             |
| VOL: mls                                           |                  | VOL: mls                                       |                  |
| NAME                                               | TIME             | NAME                                           | TIME             |
| VOL: mls                                           |                  | VOL: mls                                       |                  |
| NAME                                               | TIME             | NAME                                           | TIME             |
| VOL: mls                                           |                  | VOL: mls                                       |                  |
| DELIVERED TO:                                      |                  | DELIVERED TO: <u>H.C. LAB</u>                  |                  |
| DATE: TIME:                                        |                  | DATE: <u>3-8-07</u> TIME: <u>2:05</u>          |                  |

E EFFLUENT GRAB (1000 mls)  
7-DAYS DURING Bio-  
logy EVENT ☐

# ☐

|                                       |       |
|---------------------------------------|-------|
| TYPE OF SAMPLE: FECAL COLIFORM (GRAB) |       |
| SAMPLE DATE:                          |       |
| EXPLAIN LOCATION:                     |       |
| NAME                                  | TIME  |
| VOL: mls                              |       |
| DELIVERED TO:                         |       |
| DATE:                                 | TIME: |

40 Lab

I have accepted the above sample:

NAME [Signature]

DATE 3-8-07 TIME 12:30

and delivered to:

DATE TIME

I have accepted the above sample:

NAME

DATE TIME

and delivered to:

DATE TIME

I have accepted the above sample:

NAME

DATE TIME

and delivered to:

DATE TIME

I have accepted the above sample:

NAME

DATE TIME

181713-17

| NAME OF TREATMENT PLANT <u>HILE CREEK</u>               |                                      | Bio-Monitoring                                |                                      |
|---------------------------------------------------------|--------------------------------------|-----------------------------------------------|--------------------------------------|
| TYPE OF SAMPLE: INFLUENT (COMPOSITE) <u>X</u>           |                                      | TYPE OF SAMPLE: EFFLUENT (COMPOSITE)          |                                      |
| SAMPLE DATE: <u>3-9-07 TO 3-10-07</u>                   |                                      | SAMPLE DATE: <u>3-9-07 TO 3-10-07</u>         |                                      |
| EXPLAIN LOCATION: <u>RAW SEWAGE INFLUENT</u>            |                                      | EXPLAIN LOCATION: <u>U-V SYSTEM DISCHARGE</u> |                                      |
| NAME <u>Cr</u>                                          | TIME <u>730</u> VOL: mls <u>1000</u> | NAME <u>Cr</u>                                | TIME <u>730</u> VOL: mls <u>4000</u> |
| NAME <u>Auto Sample</u>                                 | TIME _____ VOL: mls _____            | NAME <u>Auto</u>                              | TIME _____ VOL: mls _____            |
| NAME <u>Auto</u>                                        | TIME _____ VOL: mls _____            | NAME <u>Auto</u>                              | TIME _____ VOL: mls _____            |
| NAME _____                                              | TIME _____ VOL: mls _____            | NAME _____                                    | TIME _____ VOL: mls _____            |
| DELIVERED TO: <u>H.C. LAB</u>                           |                                      | DELIVERED TO: <u>H.C. LAB</u>                 |                                      |
| DATE: <u>3-10-07</u> TIME: <u>735</u>                   |                                      | DATE: <u>3-10-07</u> TIME: <u>735</u>         |                                      |
| TYPE OF SAMPE: EFF. NH <sub>3</sub> N (COMPOSITE) _____ |                                      | TYPE OF SAMPLE: OTHER <u>Mixed Line Grab</u>  |                                      |
| SAMPLE DATE: _____                                      |                                      | SAMPLE DATE: <u>3-10-07</u>                   |                                      |
| EXPLAIN LOCATION: _____                                 |                                      | EXPLAIN LOCATION: <u>#3 SPLITTER BOX</u>      |                                      |
| NAME _____                                              | TIME _____ VOL: mls _____            | NAME <u>Cr</u>                                | TIME <u>710</u> VOL: mls <u>1000</u> |
| NAME _____                                              | TIME _____ VOL: mls _____            | NAME _____                                    | TIME _____ VOL: mls _____            |
| NAME _____                                              | TIME _____ VOL: mls _____            | NAME _____                                    | TIME _____ VOL: mls _____            |
| NAME _____                                              | TIME _____ VOL: mls _____            | NAME _____                                    | TIME _____ VOL: mls _____            |
| DELIVERED TO: _____                                     |                                      | DELIVERED TO: <u>H.C. LAB</u>                 |                                      |
| DATE: _____ TIME: _____                                 |                                      | DATE: <u>3-10-07</u> TIME: <u>715</u>         |                                      |

E EFFLUENT GRAB (1000 mls)  
7-DAYS DURING Bio-  
logy EVENT ☐

|                                             |                           |
|---------------------------------------------|---------------------------|
| TYPE OF SAMPLE: FECAL COLIFORM (GRAB) _____ |                           |
| SAMPLE DATE: _____                          |                           |
| EXPLAIN LOCATION: _____                     |                           |
| NAME _____                                  | TIME _____ VOL: mls _____ |
| DELIVERED TO: _____                         |                           |
| DATE: _____                                 | TIME: _____               |

I have accepted the above sample:

NAME Ben Buhl

DATE 3-10-07 TIME 9:00

and delivered to: Buhlman Co

DATE 3-10-07 TIME 10:00

I have accepted the above sample:

NAME \_\_\_\_\_

DATE \_\_\_\_\_ TIME \_\_\_\_\_

and delivered to: \_\_\_\_\_

DATE \_\_\_\_\_ TIME \_\_\_\_\_

I have accepted the above sample:

NAME \_\_\_\_\_

DATE \_\_\_\_\_ TIME \_\_\_\_\_

and delivered to: \_\_\_\_\_

DATE \_\_\_\_\_ TIME \_\_\_\_\_

I have accepted the above sample:

NAME \_\_\_\_\_

DATE \_\_\_\_\_ TIME \_\_\_\_\_



Date of Issue: March 20, 2007

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Metropolitan Sewer District c/o Mr. Eric Brady  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP: Influent day 1.

**BECKMAR CERTIFICATE OF ANALYSIS # 181342**

Sample Date: 3/6/2007

Sample Time: 7:30

Sampled by: Client

| Parameter  | Results | Units | Type | Method    | Analyzed<br>Date / Time | Analyst |
|------------|---------|-------|------|-----------|-------------------------|---------|
| Nickel     | 0.037   | mg/l  | C    | EPA 200.7 | 3/13/2007 14:00         | ALS     |
| Nickel (D) | 0.025   | mg/l  | C    | EPA 200.7 | 3/13/2007 14:00         | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

Jefferson Town Business Park

251 Ruckriegel Parkway

Jefferson Town, KY 40299

502-266-6533

FAX 502-266-6446



Date of Issue: March 20, 2007

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Metropolitan Sewer District c/o Mr. Eric Brady  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP: MLSS day 1.

**BECKMAR CERTIFICATE OF ANALYSIS # 181343**

Sample Date: 3/6/2007

Sample Time: 8:00

Sampled by: Client

| Parameter  | Results | Units | Type | Method    | Analyzed<br>Date / Time | Analyst |
|------------|---------|-------|------|-----------|-------------------------|---------|
| Nickel     | 0.441   | mg/l  | C    | EPA 200.7 | 3/13/2007 14:00         | ALS     |
| Nickel (D) | 0.025   | mg/l  | C    | EPA 200.7 | 3/13/2007 14:00         | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

Jefferson Town Business Park

3251 Ruckriegel Parkway

Jefferson Town, KY 40299

502.266.6533

FAX 502.266.6446



Date of Issue: March 16, 2007

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Metropolitan Sewer District c/o Mr. Eric Brady  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP: Influent day 2.

**BECKMAR CERTIFICATE OF ANALYSIS # 181690**

Sample Date: 3/8/2007

Sample Time: 7:30

Sampled by: Client

| Parameter  | Results | Units | Type | Method    | Analyzed<br>Date / Time | Analyst |
|------------|---------|-------|------|-----------|-------------------------|---------|
| Nickel     | 0.051   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |
| Nickel (D) | 0.034   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

Hofferson Town Business Park

251 Rockledge Parkway

Hofferson Town, KY 40299

02-266-6533

AX 502-266-6446



Date of Issue: March 16, 2007

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Metropolitan Sewer District c/o Mr. Eric Brady  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP; Effluent day 2.

**BECKMAR CERTIFICATE OF ANALYSIS # 181689**

Sample Date: 3/8/2007

Sample Time: 7:30

Sampled by: Client

| Parameter  | Results | Units | Type | Method    | Analyzed<br>Date / Time | Analyst |
|------------|---------|-------|------|-----------|-------------------------|---------|
| Nickel     | 0.028   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |
| Nickel (D) | 0.023   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

Jeffersontown Business Park

251 Ruckriegel Parkway

Jeffersontown, KY 40299

502-266-6533

FAX 502-266-6446



Date of Issue: March 16, 2007

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Metropolitan Sewer District c/o Mr. Eric Brady  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP: MLSS day 2.

**BECKMAR CERTIFICATE OF ANALYSIS # 181691**

Sample Date: 3/8/2007

Sample Time: 7:00

Sampled by: Client

| Parameter  | Results | Units | Type | Method    | Analyzed<br>Date / Time | Analyst |
|------------|---------|-------|------|-----------|-------------------------|---------|
| Nickel     | 0.464   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |
| Nickel (D) | 0.030   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

Jeffersontown Business Park

251 Ruckriegel Parkway

Jeffersontown, KY 40299

12.266.6533

FAX 502.266.6446



Date of Issue: March 16, 2007

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Metropolitan Sewer District c/o Mr. Eric Brady  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP: Effluent day 3.

**BECKMAR CERTIFICATE OF ANALYSIS # 181714**

Sample Date: 3/10/2007

Sample Time: 7:30

Sampled by: Client

| Parameter  | Results | Units | Type | Method    | Analyzed<br>Date / Time | Analyst |
|------------|---------|-------|------|-----------|-------------------------|---------|
| Nickel     | 0.030   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |
| Nickel (D) | 0.028   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

Harrisontown Business Park

251 Ruckriegel Parkway

Harrisontown, KY 40299

266.6533

X 502.266.6446



Date of Issue: March 16, 2007

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Metropolitan Sewer District c/o Mr. Eric Brady  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP: Influent day 3.

**BECKMAR CERTIFICATE OF ANALYSIS # 181715**

Sample Date: 3/10/2007

Sample Time: 7:30

Sampled by: Client

| Parameter  | Results | Units | Type | Method    | Analyzed<br>Date / Time | Analyst |
|------------|---------|-------|------|-----------|-------------------------|---------|
| Nickel     | 0.051   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |
| Nickel (D) | 0.041   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

Jeffersontown Business Park

251 Ruckriegel Parkway

Jeffersontown, KY 40299

502-266-6533

FAX: 502-266-6446



Date of Issue: March 16, 2007

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Metropolitan Sewer District c/o Mr. Eric Brady  
700 West Liberty St.  
Louisville, KY 40203-1913

RE: Analysis results for: Hite Creek WWTP: MLSS day 3.

**BECKMAR CERTIFICATE OF ANALYSIS # 181716**

Sample Date: 3/10/2007

Sample Time: 7:10

Sampled by: Client

| Parameter  | Results | Units | Type | Method    | Analyzed<br>Date / Time | Analyst |
|------------|---------|-------|------|-----------|-------------------------|---------|
| Nickel     | 0.551   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |
| Nickel (D) | 0.038   | mg/l  | C    | EPA 200.7 | 3/14/2007 11:00         | ALS     |

Remarks:

If you have any questions please call.

Thank you,

Joe P. Carney  
Quality Control Officer

JPC:dwt

ENVIRONMENTAL  
LABORATORY

Hersontown Business Park

151 Rockjagel Parkway

Hersontown, KY 40299

2266-6533

X 502-266-6446