MONITORING AND REPORTING PROGRAM NO. R1-2008-0003

FOR

HOPLAND PUBLIC UTILITIES DISTRICT
WASTEWATER TREATMENT FACILITY

Mendocino County

## FLOW MEASUREMENT

Influent wastewater flow shall be calculated or measured continuously and the total influent flow for each day reported monthly. The total discharge flow to the percolation ponds shall be measured or calculated daily for each pond when discharging to the percolation pond, and reported in the monthly monitoring report. All flow measurement devices shall be tested at least annually and their accuracy certified. Certification shall be submitted with the annual monitoring report.

## SEPTAGE WASTE MONITORING

For any month when septage waste is discharged to the treatment facility or collection system, a representative of the Hopland Public Utility District (hereafter Discharger) shall collect at least one grab sample from each septage load accepted by the Discharger. The Discharger shall ensure that the grab sample is collected in a manner that results in a sample that is representative of the septage load. The Discharger shall measure the pH of each septage sample upon collection, label the sample with appropriate identification, and immediately refrigerate the sample at 4ºC ± 0.5. Samples may be discarded after 7 days if there is no indication of plant upset that may be attributed to a septage load.

The Discharger shall collect random[1] septage samples and have the sample analyzed in accordance with the following table.

**Table 1. Septage Monitoring**

| Constituent | Units | Analytical Method | Frequency (minimum) |
|---|---|---|---|
| Chemical Oxygen Demand | mg/L | SM 5220 | quarterly |
| Grease and Oil | mg/L | EPA 1664 | quarterly |
| Metals and Trace Elements | µg/L | EPA 200.7 | quarterly |
| Purgeable Organic Compounds | µg/L | EPA 624 | Once every 6 months |

[1] To select a random sample, the Discharger shall estimate, prior to the beginning of a quarterly and semiannual monitoring period, the number of anticipated septage deliveries for the given monitoring frequency, and generate a random load number from this total. When the delivery corresponding to the pre-chosen random number is received, the Discharger will collect a representative septage sample and have the samples analyzed in accordance with Table 1 and with standard sample collection and handling procedures.

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| Constituent | Units | Analytical Method | Frequency (minimum) |
|---|---|---|---|
| SemivolatileOrganic Compounds | µg/L | EPA 625 | Once every 6 months |

## EFFLUENT MONITORING

Monitoring samples of treated effluent shall be collected and analyzed when there is discharge to the percolation ponds, in accordance with the following table. The sampling location for effluent samples shall be a point after completion of treatment and prior to discharge to the percolation ponds.

**Table 2. Effluent Monitoring**

| Constituent | Units | Type of Sample | Sample Frequency | Reporting Frequency |
|---|---|---|---|---|
| BOD (20$^{o}$C, 5-day) | mg/L | Grab | Weekly | Monthly |
| Suspended Solids | mg/L | Grab | Weekly | Monthly |
| Settleable Solids | mL/L | Grab | Weekly | Monthly |
| Total Coliform Organisms | MPN/100 ml | Grab | Weekly | Monthly |
| Total Residual Chlorine | mg/L | Grab | Weekly | Monthly |
| Hydrogen Ion | pH Units | Grab | Weekly | Monthly |
| Ammonia-Nitrogen | mg/L | Grab | Monthly | Monthly |
| Nitrate-Nitrogen | mg/L | Grab | Monthly | Monthly |
| Total Nitrogen | mg/L | Grab | Monthly | Monthly |
| Total Phosphorous | mg/L | Grab | Monthly | Monthly |

## POND MONITORING

The treatment and settling pond shall be monitored as follows:

**Table 3. Pond Monitoring**

| Constituent | Units | Type of Sample | Sample Frequency | Reporting Frequency |
|---|---|---|---|---|
| Dissolved Oxygen | mg/L | Grab | Weekly | Monthly |
| Freeboard | 0.1 feet | Measurement | Weekly | Monthly |
| Odors | --- | Observation | Weekly | Monthly |

## GROUNDWATER MONITORING

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Beginning July 1, 2008, the Discharger shall conduct routine groundwater monitoring in the vicinity of its treatment and percolation ponds. The routine groundwater monitoring program shall consist of the following:

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## 1. Monitoring Well Construction

At least 45 days prior to construction of any new groundwater monitoring well, the Discharger shall submit well construction plans and specifications to the Regional Board for review and approval. Every monitoring well shall be constructed to yield representative samples year-round from the uppermost layer of the uppermost aquifer and to comply with applicable well standards. Within 60 days after completion of well construction, the Discharger shall submit a report that includes, but is not limited to, relevant subsurface stratigraphy and lithology, a diagram of the well showing total drilled depth, well installation depth, construction details including screened interval, surveyed top of casing elevation, and a location map for all installed wells, surveyed to the nearest 0.1 foot.

## 2. Monitoring Locations

Groundwater monitoring wells shall be located to allow evaluation of the groundwater quality upgradient of the treatment facility and downgradient of Percolation Ponds #1 and #2 and the unlined facultative treatment pond. Additional monitoring wells constructed at the site shall be added to the monitoring network as needed. Samples shall be collected from all installed wells for the constituents specified in Table 4.

## 3. Monitoring Schedule

Groundwater samples shall be collected from monitoring wells on at least a quarterly basis concurrent with the discharge to the percolation ponds. Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged of at least three well volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured prior to purging to the nearest 0.01 feet. Samples shall be collected using standard EPA methods. Groundwater samples shall be collected and analyzed for the following constituents:

**Table 4. Groundwater Monitoring Parameters**

| Constituent | Units | Type of Sample | Frequency |
|---|---|---|---|
| Depth to groundwater | 0.01 feet | Measurement | Quarterly |
| Groundwater Elevation | 0.01 feet | calculation | Quarterly |
| Gradient | Feet/feet | calculation | Quarterly |
| Gradient Direction | degrees | calculation | Quarterly |
| Total Dissolved Solids | mg/L | Grab | Quarterly |
| Total Coliform Organisms | MPN/100 mL | Grab | Quarterly |
| Total Kjeldahl Nitrogen | mg/L | Grab | Quarterly |

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| Constituent | Units | Type of Sample | Frequency |
|---|---|---|---|
| Nitrate as Nitrogen | mg/L | Grab | Quarterly |
| Total Phosphorous | mg/L | Grab | Quarterly |
| Phenol | µg/L | Grab | Quarterly |
| Toluene | µg/L | Grab | Quarterly |
| Copper | µg/L | Grab | Quarterly |
| 1,4-dichlorobenzene | µg/L | Grab | Quarterly |
| Zinc | µg/L | Grab | Quarterly |
| Mercury | µg/L | Grab | Quarterly |

## SLUDGE MONITORING

Prior to the removal of sludge from the any treatment or storage pond, a composite sample shall be collected and tested for the following metals: Cadmium, Copper, Nickel, Chromium, Lead, and Zinc. The composite sample will be comprised of a sufficient number of discrete samples so as to be representative of the treatment or storage pond. Sampling results shall be reported to the Regional Water Board as soon as the results are known and prior to sludge removal.

## MONTHLY MONITORING REPORT

The purpose of the report is to document treatment performance, effluent quality and compliance with waste discharge requirements. For each calendar month, a self-monitoring report shall be submitted to the Regional Water Board in accordance with the following:

1. The report shall be submitted by the first day of the second month following the end of the month as follows.

**Table 5. Monitoring Report Due Dates**

| Reporting Period | Monitoring Period | Report Due Date[2] |
|---|---|---|
| January | January 1 – January 31 | March 1 |
| February | February 1 – February 28/29 | April 1 |
| March | March 1 – March 31 | May 1 |
| April | April 1 – April 30 | June 1 |

[2] Monthly reports shall be received by the Regional Water Board no later than 5:00 p.m. on the applicable due date. For compliance purposes, a copy of monthly reports received by facsimile will be accepted in lieu of reports received by hand delivery or by post, provided the report is complete and clearly legible as determined by the Regional Water Board, is received by 5:00 p.m. on the applicable Report Due Date and the original signed report is received by the Regional Water Board within five days after the Report Due Date.

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| Reporting Period | Monitoring Period | Report Due Date[2] |
|---|---|---|
| May | May 1 – May 31 | July 1 |
| June | June 1 – June 30 | August 1 |
| July | July 1 – July 31 | September 1 |
| August | August 1 – August 31 | October 1 |
| September | September 1 – September 30 | November 1 |
| October | October 1 – October 31 | December 1 |
| November | November 1 – November 30 | January 1 |
| December | December 1 – December 31 | February 1 |

2. **Letter of Transmittal.** Each report shall be submitted with a letter of transmittal. This letter shall include the following:

   a. Identification of facility: Name, address, Order number, and WDID number;
   b. Date of report and monitoring period;
   c. Identification of all violations of effluent limitations or other discharge requirements found during the monitoring period;
   d. Details of the violations: parameters, magnitude, test results, frequency, and dates;
   e. The cause of the violation;
   f. Discussion of corrective actions taken or planned to resolve violations and prevent recurrence, and dates or time schedule of action implementation;
   g. Other relevant information including, but not limited to, incidents of wastewater treatment and collection system equipment failure and reports of sanitary sewer overflows;
   h. Authorized signature and certification statement.

3. **Compliance Evaluation Summary.** Each report shall include a compliance evaluation summary. The summary shall illustrate clearly the facility's compliance with all waste discharge requirements, as required. During periods of no discharge, the reports shall certify that there was no discharge.

4. **Results of Analyses and Observations**. Each report shall include the following:

   a. Tabulations of all required analyses, including parameter, sample date and time, sample station, and test result;
   b. Written summary of results of all visual monitoring conducted during the monitoring period that indicate non-compliance with provisions of waste discharge requirements;
   c. If the Discharger monitors any pollutant at the point of compliance or conducts visual inspection more frequently than required by this Permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and report of the data submitted in the Discharger's monitoring report

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5. **Report Submittal.** Copies of each monitoring report shall be mailed to:

North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

## ANNUAL REPORT

The Discharger shall submit an annual report to the Regional Water Board for each calendar year. The report shall be submitted so that it is received by the Regional Water Board by March 1st of the following year. The report shall include, at a minimum, the following:

1. **Influent and Effluent Monitoring Data.** A summary of influent and effluent monitoring data from the previous year shall be provided in a tabular format and shall, where appropriate, include graphical presentations of monitoring data and disposal records; and

2. **Septage Monitoring.** The results of septage monitoring shall be provided as follows:

   a. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the septage monitoring program. The narrative shall be sufficiently detailed to verify compliance with waste discharge requirements and this monitoring and reporting program.

   b. A summary table of all discharges of septage to the WWTF. At a minimum, the table shall include; the date and time of discharge, the name, County ID number, and District ID number of the hauler, the volume discharged, and the source(s) of the waste.

   c. A summary table of analytical results for all samples of septage collected in compliance with waste discharge requirements and this monitoring and reporting program. When directed by the Regional Water Board, the Discharger shall also append analytical reports, chains of custody, and other documentation necessary to confirm the validity of the monitoring samples.

3. **Groundwater Monitoring.** The results of groundwater monitoring shall be provided as follows:

   a. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with waste discharge requirements, this monitoring and reporting program, and the Standard Provisions and Reporting

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Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;

b. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;

c. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);

d. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;

e. Summary data tables of historical and current water table elevations and analytical results;

f. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and

g. Copies of laboratory analytical report(s) for groundwater monitoring.

4. **Compliance Evaluation Summary** The Discharger shall provide a comprehensive discussion of the facility's compliance with all effluent and receiving water limitations and other waste discharge requirements, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Permit.

Ordered by: _____
Catherine Kuhlman
Executive Officer

June 12, 2008



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