

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. _____

NPDES NO. CA0083046
FOR
THE VENDO COMPANY
GROUNDWATER REMEDIATION SYSTEM
FRESNO COUNTY

Specific sample station locations shall be established with concurrence of the Regional Board's staff, and the Discharger shall attach a description of the stations to its copy of this Monitoring and Reporting Program. All analyses shall be performed using methods approved by USEPA and the Regional Board. In reporting data, the Discharger shall indicate whether any analysis was performed using a method not in conformance with USEPA's Guidelines.

If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge the Discharger shall monitor and record influent, mid-treatment, and effluent data for all of the constituents listed below, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. For this Order, the Regional Board considers an intermittent discharge, any period of no discharge prolonged more than seven days. In no event shall the Discharger be required to monitor and record the data more often than twice the frequencies listed in the schedule.

INFLUENT MONITORING

Samples shall be collected for each extraction well (E-1B and E-2B) prior to groundwater entering the GWRs. Influent samples shall be representative of the volume and quality of extracted groundwater. The time of collection of samples shall be recorded. Influent monitoring shall include at least the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Flow	mgd	Metered	Daily
Chloroform	µg/L	Grab	Monthly
Chromium (III) (total recoverable)	µg/L	Grab	Monthly
Chromium (VI) (total recoverable)	µg/L	Grab	Monthly
Copper (total recoverable)	µg/L	Grab	Monthly
Dichlorodifluoromethane	µg/L	Grab	Monthly
1,1-Dichloroethane (1,1-DCA)	µg/L	Grab	Monthly
1,1-Dichloroethylene (1,1-DCE)	µg/L	Grab	Monthly
cis-1,2-Dichloroethylene (cis-1,2-DCE)	µg/L	Grab	Monthly
1,2-Dichloropropane (1,2-DCP)	µg/L	Grab	Monthly
Methylene Chloride	µg/L	Grab	Monthly

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<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Conductivity at 25°C	µmhos/cm	Grab	Monthly
Tetrachloroethene (PCE)	µg/L	Grab	Monthly
trans-1,2 Dichloroethene (trans-1,2-DCE)	µg/L	Grab	Monthly
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	Grab	Monthly
Trichlorofluoromethane	µg/L	Grab	Monthly
Trichloroethylene (TCE)	µg/L	Grab	Monthly
Zinc (total recoverable)	µg/L	Grab	Monthly
Other VOCs ¹	µg/L	Grab	Monthly

¹ All typical VOCs listed in Appendix 4 of the SIP.

EFFLUENT MONITORING – OUTFALL 001

Effluent samples shall be collected at Outfall 001 downstream from the last connection through which wastes can be admitted into the outfall. Effluent samples shall be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. Effluent monitoring shall include at least the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Flow	mgd	Metered	Daily
Chloroform	µg/L	Grab	Monthly
Chromium (III) (total recoverable)	µg/L	Grab	Monthly
Chromium (VI) (total recoverable)	µg/L	Grab	Monthly
Copper (total recoverable)	µg/L	Grab	Monthly
Dichlorodifluoromethane	µg/L	Grab	Monthly
1,1-DCA	µg/L	Grab	Monthly
1,1-DCE	µg/L	Grab	Monthly
cis-1,2-DCE	µg/L	Grab	Monthly
1,2-DCP	µg/L	Grab	Monthly
Hardness (as CaCO ₃) ¹	mg/L	Grab	Monthly
Methylene Chloride	µg/L	Grab	Monthly
Conductivity at 25°C	µmho/cm	Grab	Monthly
PCE	µg/L	Grab	Monthly
trans-1,2-DCE	µg/L	Grab	Monthly
1,1,1-TCA	µg/L	Grab	Monthly
Trichlorofluoromethane	µg/L	Grab	Monthly

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<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
TCE	µg/L	Grab	Monthly
Zinc (total recoverable)	µg/L	Grab	Monthly
Other VOCs ²	µg/L	Grab	Monthly
General Minerals ³	mg/L	Grab	Annually
Acute Toxicity ⁴	% Survival	Grab	Quarterly
Temperature	°F	Grab	Monthly
pH	standard units	Grab	Monthly

¹ Hardness of the effluent shall be recorded at the time of sample collection for metals analyses.

² All typical VOCs listed in Appendix 4 of the SIP.

³ General Minerals as referred to in this program shall include total dissolved solids and other cations and anions present in the discharge. The cations and anions include iron, magnesium, manganese, potassium, sulfate, chloride and all other major cations and anions. Analyses shall be accompanied by charge balance (anion and cation balance).

⁴ Acute toxicity bioassays shall be performed according to EPA-821-R-02-012 *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition*, October 2002 (or latest edition) using *Pimephales promelas* with no pH adjustment, with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP). Temperature and pH shall be recorded at the time of bioassay sample collection.

If other constituents of concern are identified as being present or potentially being present in groundwater discharged under this Order, then this Order may be revised or a new monitoring and reporting program issued to include monitoring requirements for those constituents.

If effluent monitoring detects a pollutant at concentrations greater than the daily maximum effluent limitation established in Order No. _____, the Discharger shall resample and reanalyze the discharge immediately after knowledge of the exceedance and the frequency of sampling should be increased to daily until compliance is verified.

The Discharger shall report the Minimum Level (ML) and the laboratory's (Method Detection Limit) MDL for each sample result. Results greater than or equal to the ML shall be reported as measured. Sample results less than the ML but greater than or equal to the laboratory's MDL, shall be reported as "Detected but Not Quantified" (DNQ). The estimated chemical concentration of the sample shall also be reported. The laboratory may include numerical estimates of the data quality. Results less than the laboratory's MDL shall be reported as "Not Detected" (ND).

PRIORITY POLLUTANT MONITORING

The Discharger shall monitor the effluent and receiving water (at R-1) **once between 27 January 2010 and 27 July 2010** for priority pollutants. Priority pollutants are defined as USEPA priority toxic pollutants, and consist of the constituents listed in the most recent NTR and CTR. Volatile organic priority pollutants are listed in Tables 2a and 2b in Appendix 4 of the SIP. Results of sampling shall be submitted by the **first day of the second month** following sampling. Reporting shall conform with SIP Reporting Requirements, Section 2.4 et seq. In particular, the reported MLs shall be at least as low as the lowest ML for each priority pollutant specified in Appendix 4 of the SIP. **Effluent and**

receiving water samples must be analyzed for pH and hardness in order to calculate translators, which are needed for pollutants that are hardness and/or pH dependent. All analyses shall be performed at a laboratory certified by the California Department of Health Services.

<u>Constituent</u> ^{1,2}	<u>Units</u>	<u>Type of Sample</u>
Arsenic	µg/L	Grab
Chromium (VI)	µg/L	Grab
Mercury	µg/L	Grab
Metals	µg/L	Grab
Pesticides	µg/L	Grab
Semi-Volatile Organics	µg/L	Grab
VOCs	µg/L	Grab

¹ Constituents shall be analyzed using a method approved in 40 CFR 136.3. The chosen analytical method must be able to achieve the required quantitation limit for the given constituent, as specified by the MLs listed in Appendix 4 of the SIP.

² Report all detected peaks.

CARBON FILTER BREAKTHROUGH CURVES

The previous Order No. 99-012 required the Discharger to provide to the Regional Board a proposed program for determining the break-through point of the carbon filters and a means of providing compliance with Order No. 99-012 during the period when the break-through point is approached. This study was to be conducted upon startup of the Phase III GWRS. The Discharger failed to implement this study.

By 28 March 2006, the Discharger shall provide to the Regional Board a proposed program for determining the breakthrough point of the carbon filters and a means of providing compliance with requirements of this Order during the period when the breakthrough point is approached. The program shall include the following:

- a. A proposed monitoring program, including frequency of monitoring, for determining the breakthrough point.
- b. The rationale for “a” above that incorporates system design, constituent concentrations, loading rates, and estimated breakthrough period.

Within two weeks from the first regeneration or replacement of the carbon filtration units the Discharger shall submit an engineering report that includes the breakthrough curve showing organic constituents and regulated metals concentrations as a function of throughput volume, any proposed revisions in monitoring frequencies based on the constructed curve, and the rationale for the proposed revisions.

After presentation of appropriate breakthrough curves and/or performance data of the GWRS system by the Discharger, monthly monitoring may be decreased to quarterly upon the written approval of the Executive Officer.

GROUNDWATER TREATMENT PLANT STARTUP MONITORING

If the GWRS has a scheduled or unscheduled shutdown that lasts longer than 72 hours or which could result in noncompliance on startup regardless of the downtime, the Discharger shall conduct the influent and effluent monitoring requirements upon startup of the treatment system using the following monitoring schedule:

- Immediately upon startup
- Daily for the first five days of operation
- Monthly thereafter in accordance with the influent and effluent monitoring schedules.

RECEIVING WATER MONITORING

All receiving water samples shall be grab samples except for flow, which shall be an estimate. Samples shall be collected at approximately the same time as the collection of effluent samples. Receiving water monitoring is not required when the discharge represents the entire flow in the receiving waters. Receiving water monitoring shall include at least the following and be performed at the sample stations associated with the approved discharge point in use:

<u>Station</u>	<u>Description</u>
R-1	100 ft or more upstream from the point of discharge (Outfall 001) to the Bullard Canal ¹
R-2	500 ft or more downstream from the point of discharge (Outfall 001) to the Bullard Canal ¹

¹ If necessary, stations may be located more or less distant from the point of discharge to obtain valid sample results because of backwater conditions, access limitations to the closed conduit portions of the canals, or other conditions. Alternate locations are subject to approval of the Executive Officer.

<u>Constituent</u>	<u>Units</u>	<u>Station</u>	<u>Sampling Frequency</u>
Flow	mgd	R-1, R-2	Monthly
Chloroform	µg/L	R-1, R-2	Quarterly
Chromium (III) (total recoverable)	µg/L	R-1, R-2	Quarterly
Chromium (VI) (total recoverable)	µg/L	R-1, R-2	Quarterly
Copper (total recoverable)	µg/L	R-1, R-2	Quarterly
Dichlorodifluoromethane	µg/L	R-1, R-2	Quarterly
1,1-DCA	µg/L	R-1, R-2	Quarterly
1,1-DCE	µg/L	R-1, R-2	Quarterly
cis-1,2-DCE	µg/L	R-1, R-2	Quarterly
1,2-DCP	µg/L	R-1, R-2	Quarterly

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<u>Constituent</u>	<u>Units</u>	<u>Station</u>	<u>Sampling Frequency</u>
Hardness (as CaCO ₃) ¹	mg/L	R-1, R-2	Monthly
Methylene Chloride	µg/L	R-1, R-2	Quarterly
Conductivity at 25°C	µmho/cm	R-1, R-2	Monthly
PCE	µg/L	R-1, R-2	Quarterly
trans-1,2-DCE	µg/L	R-1, R-2	Quarterly
1,1,1-TCA	µg/L	R-1, R-2	Quarterly
Trichlorofluoromethane	µg/L	R-1, R-2	Quarterly
TCE	µg/L	R-1, R-2	Quarterly
Zinc (total recoverable)	µg/L	R-1, R-2	Quarterly
Other VOCs ²	µg/L	R-1, R-2	Quarterly
General Minerals ³	mg/L	R-1, R-2	Annually
Dissolved Oxygen	mg/L	R-1, R-2	Monthly
Temperature	°F	R-1, R-2	Monthly
pH	standard units	R-1, R-2	Monthly

¹ Hardness of the effluent shall be recorded at the time of sample collection for metals analyses.

² All typical VOCs listed in Appendix 4 of the SIP.

³ General Minerals as referred to in this program shall include total dissolved solids and other cations and anions present in the discharge. The cations and anions include iron, magnesium, manganese, potassium, sulfate, chloride and all other major cations and anions. Analyses shall be accompanied by charge balance (anion and cation balance).

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions, in the sampling locations. Attention shall be given to the presence or absence of:

- a. Floating or suspended matter
- b. Discoloration
- c. Bottom deposits
- d. Aquatic life
- e. Visible films, sheens or coatings
- f. Fungi, slimes, or objectionable growths
- g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monitoring report.

THREE SPECIES CHRONIC TOXICITY MONITORING

Chronic toxicity monitoring shall be conducted to determine whether the effluent is contributing toxicity in the receiving water. The testing shall be conducted as specified in EPA/821/R-02/013, or later amendment. Chronic toxicity samples shall be collected at the last point

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of discharge prior to its entering the receiving water. Time of samples collection shall be recorded. The effluent tests must be conducted with concurrent reference toxicant tests. Monthly laboratory reference toxicant tests may be substituted upon approval. Both the reference toxicant and effluent tests must meet all test acceptability criteria as specified in the chronic manual. If the test acceptability criteria are not achieved, then the Discharger must re-sample and re-test within 14 days. Chronic toxicity monitoring shall include the following:

Species: Pimephales promelas, Ceriodaphnia dubia, and Selenastrum capricornutum

Frequency: Quarterly¹

Dilution Series:

Sample	Dilution(%)					Controls	
	100	75	50	25	12.5	Canal Water	Lab Water
% GWRS Effluent	100	75	50	25	12.5	0	0
% Dilution Water ²	0	25	50	75	87.5	100	0
% Lab Water	0	0	0	0	0	0	100

¹ If after four consecutive sampling events the Discharger can demonstrate that the discharge does not cause or have reasonable potential to cause, or contribute to chronic toxicity in the receiving waters the Discharger may discontinue chronic toxicity testing for the remainder of the term of this Order subject to the approval of the Executive Officer.

² Dilution water shall be receiving water.

REPORTING

At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.

Monitoring results shall be submitted to the Regional Board by the **1st day of the second month following sample collection**. Quarterly monitoring results shall be submitted by the **1st day of the second month following the end of each calendar quarter (i.e., by 1 February, 1 May, 1 August, and 1 November) following each calendar quarter**. Annual monitoring results shall be submitted by **1 February of each year**. Reports shall be submitted whether or not there was a discharge during the reporting period. Failure to submit a report will result in an assessment of a Minimum Mandatory Penalty pursuant to CWC Section 13385.

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly the compliance with waste discharge requirements. The highest daily maximum for the month and monthly averages shall be determined and recorded. The report shall also include an evaluation of the groundwater cleanup progress, trends, monitoring well analyses and plume containment. If this evaluation is already submitted to the Regional Board in a separate report, then the Discharger may reference the date and title of the most recent report in lieu of including it with the NPDES monitoring report.

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If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring form.

By **1 February** of each year, the Discharger shall submit an annual written report to the Executive Officer containing the following:

- a. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations.
- b. A statement certifying when monitoring instruments and devices were last calibrated (for purposes of assuring compliance with this Order), including identification of who performed the calibration (Standard Provision C.6).
- c. A statement certifying whether the current operation and maintenance manual and contingency plan reflect the Facility as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.
- d. Tabular and graphical summaries of the monitoring data obtained during the previous year. Monitoring data shall also be submitted in electronic format acceptable to the Executive Officer (e.g. Microsoft Excel).
- e. A discussion of the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

All reports submitted in response to this Order shall comply with the signatory requirements of Standard Provision D.6.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by: _____
KENNETH D. LANDAU, Acting Executive Officer

(Date)