

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Mark Johnson)
MEETING DATE: April 8, 2009

ITEM: 5.F

SUBJECT: Great Western Chemical Company, Stinnes-Western Chemical Corporation, and GWC Properties, LLC, for the property located at 945 Ames Avenue, Milpitas, Santa Clara County - Adoption of Final Site Cleanup Requirements

CHRONOLOGY: May 1986 – Site Cleanup Requirements adopted
September 1990 – Revised Site Cleanup Requirements adopted

DISCUSSION: In the early 1980s, chlorinated solvents were detected in soil and groundwater at the former Great Western Chemical site in Milpitas, Santa Clara County. In response, the Board adopted Site Cleanup Requirements in 1986 and 1990 requiring investigation and remediation. As a result, pumping and treating of contaminated groundwater was conducted from the mid-1980s to 2006.

The dischargers, in 2006, proposed and pilot tested enhanced reductive dechlorination (ERD) as an alternative technology to address the remaining groundwater contamination at the Site. In this case, ERD involves the injection of a degradable carbohydrate solution into the contaminated groundwater, thereby accelerating the natural breakdown of the solvents. Based on the success of this pilot test, the dischargers have developed a revised cleanup plan for the site incorporating ERD.

The plan calls for using ERD throughout the groundwater contamination plume. Active cleanup would continue until contaminants have been significantly reduced such that the plume would be stable and natural processes on their own would be able to further reduce pollutant concentrations, thereby shrinking the plume and eventually restoring groundwater quality to drinking water standards.

The Revised Tentative Order (Appendix A) adopts the revised cleanup plan as described above and sets forth a schedule for implementation of specific tasks to complete site cleanup.

Board staff circulated the original tentative order for a 30-day public comment period. We received one comment letter relative to California

Environmental Quality Act (CEQA) compliance. As a result of this comment, Board staff prepared an Initial Study and a draft Negative Declaration for consideration and adoption by the Board (see Item 5.E). The original tentative order was revised to reflect these CEQA documents.

**RECOMMEN-
DATION:**

Adoption of Revised Tentative Order.

File No.:

43S0043 (MEJ)

Appendices:

A. Revised Tentative Order

B. Comments

APPENDIX A
(Revised Tentative Order)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REVISED TENTATIVE ORDER

ADOPTION OF FINAL SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDER
NO. 90-130 FOR:

GREAT WESTERN CHEMICAL COMPANY,
STINNES-WESTERN CHEMICAL CORPORATION AND
GWC PROPERTIES, LLC

for the property located at

945 AMES AVENUE
MILPITAS, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. **Site Location:** Great Western Chemical Company (Great Western) operated a chemical packaging and distribution facility at 945 Ames Avenue in Milpitas (Site). The Site is located in a commercial and industrial area of Milpitas, west of Highway 680 and north of Montague Expressway. The attached Figure 1 identifies the location of the Site as well as the off-site area which has been affected by the groundwater plume.
2. **Site History:** In 1969, Western Chemical and Manufacturing Company (WCMC), now known as Stinnes-Western Chemical Corporation, bought the undeveloped land at 945 Ames Avenue and constructed a chemical repacking facility. GWC Properties LLC purchased the facility from WCMC in December 1978, at which time Great Western was the tenant. Great Western filed for bankruptcy in 2001. GWC Properties LLC is conducting all investigation and remedial work at the Site.

Chemicals stored onsite in eight-7,500 gallon underground tanks included: butyl cellusolve, acetone, methanol, ethylene glycol, isopropanol, methyl ethyl ketone (MEK), cyclohexanone and toluene. The underground tanks were removed in 1989. Chlorinated solvents were stored in four-6,500 gallon above ground tanks. These tanks were removed in 1984 and 1985. Since that time, chemical handling operations have ceased at the Site. Investigations conducted on the property have determined that releases from the

underground pipelines associated with the storage tank system had occurred and that chemicals stored and handled on the Site are/were present in soil and groundwater.

3. **Named Dischargers:** Stinnes-Western Chemical Corporation (formerly Western Chemical and Manufacturing Company) is named as a discharger due to its past ownership of the property and its chemical storage and handling operations. Great Western Chemical Company is named as a discharger due to its past chemical storage and handling operations on the property. GWC Properties LLC is a discharger based on its current ownership of the property.

If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the site where it entered or could have entered waters of the State, the Board will consider adding those parties' names to this order.

4. **Regulatory Status:** The Board adopted Site Cleanup Requirements, Order No. 86-34, in May 1986. This Order required the dischargers to evaluate interim cleanup alternatives and implement the preferred alternative. In September 1990, the Board adopted Site Cleanup Requirements, Order No. 90-130, which rescinded Order No. 86-34, contained tasks for implementation of the final remedy, evaluation of the effectiveness of this remedy and a five-year status report on the progress of overall cleanup. This remedy was implemented at the Site.
5. **Site Hydrogeology:** The Site is underlain by alluvial material which includes three waterbearing zones: shallow, intermediate and deeper zones. The shallow zone is composed of sand, silty sand and gravel between the depth of 15 and 40 feet below ground surface (bgs). The intermediate zone consisting of smaller lenses underlies the shallow at depths between 40 and 70 feet bgs. The deeper zone consists of silty sand, sandy silts and gravelly sands and is found at greater than 70 feet bgs. The intermediate and deeper zones are separated by a clayey layer which appears to act as a confining layer. Potential uses of these three aquifer zones include domestic and municipal supply, agricultural water supply and industrial process water.
6. **Remedial Investigation:** Initial investigations on the Site were conducted in response to the Board's May 1982 Leak Detection Program. Great Western implemented an investigation to determine if solvents had leaked from any of the underground tanks or associated piping. Soil boring in the tank farm area detected: up to 11 mg/kg trichloroethene (TCE), up to 6.8 mg/kg trichloroethane (TCA), up to 2.1 mg/kg tetrachloroethene (PCE), as well as other organic solvents. Maximum concentrations detected in groundwater contained: 300 mg/l TCE, 260 mg/l TCA, 22 mg/l PCE, as well as other solvents.

Significant cleanup actions have occurred at the Site since the 1980s. Concentrations of pollutants have declined due to these efforts. The maximum concentrations most recently reported in groundwater include: TCE 0.740 mg/l; PCE 0.130 mg/l; cis-1,2-DCE 20 mg/l; Trans-1,2-DCE 0.0043 mg/l; and, vinyl chloride 0.510 mg/l.

7. **Adjacent Sites:** The Site is located in a commercial and industrial area of Milpitas. While many investigations and cleanups have occurred in this area, there do not appear to be any known releases on other properties which have impacted this Site.
8. **Remedial Measures Implemented:** Significant remedial actions have been taken at the Site as either part of interim remedial actions or the remedy described in Order No. 90-130. These actions include: 1) the removal of all underground and above ground tanks, along with their associated piping; 2) treatment of impacted soil generated during tank removal; 3) soil vapor extraction and treatment; and, 4) the installation and operation of several extraction wells onsite and offsite, as well as two associated groundwater treatment systems. Groundwater extraction and treatment occurred at the Site for almost 20 years, until February 2006 when a new technology was pilot tested at the Site.
9. **Enhanced Reductive Dechlorination Pilot Test:** The dischargers in 2006, proposed and implemented a pilot test to determine the effectiveness of enhanced reductive dechlorination (ERD) in addressing the remaining groundwater pollution at the Site. In order to do so, the groundwater extraction and treatment system was shut-down and the ERD technology has been implemented. The ERD employed the injection of a degradable carbohydrate solution into the underlying groundwater via extraction and monitoring wells. The carbohydrate mixture provided excess organic carbon, thereby initiating a chain of biologic events in the subsurface, which resulted in accelerated dechlorination of the chlorinated solvents present in groundwater. Based on the results of this pilot test, ERD appears highly effective in decreasing the mass and concentration of residual pollutants in underlying groundwater.
10. **Environmental Risk Assessment:** For VOCs identified at the Site in soil gas and shallow- and intermediate-zone groundwater, risk-based screening levels were used as the framework for the risk assessment as discussed below.
 - a. **Screening Levels:** A screening level environmental risk assessment was carried out to evaluate potential environmental concerns related to identified soil and groundwater impacts. Chemicals evaluated in the risk assessment include tetrachloroethene, trichloroethene, *cis*-1,2-dichloroethene, *trans*-1,2-dichloroethene, and vinyl chloride, the primary chemicals of concern identified at the Site.

As part of the assessment, Site data were compared to the Board's Environmental Screening Levels (ESLs). The presence of chemicals at concentrations above the ESLs indicates that additional evaluation of potential threats to human health and the environment is warranted. Screening levels for groundwater address the following environmental concerns: 1) drinking water impacts (toxicity and taste and odor), 2) impacts to indoor air, and 3) migration and impacts to aquatic habitats. Screening levels for soil address: 1) direct exposure, 2) impacts to indoor air, 3) leaching to groundwater, and 4) nuisance issues. Screening levels for drinking water are based on the lowest of toxicity-based standards (e.g., promulgated Primary MCLs or equivalent) and standards based on taste and odor concerns (e.g., Secondary MCLs or equivalent). Chemical-specific screening levels for other human health concerns (i.e., indoor-air and direct-exposure) are based on a target excess cancer risk of 1×10^{-6} for carcinogens and a target Hazard Quotient of 0.2 for noncarcinogens. Groundwater screening levels for the protection of aquatic habitats are based on promulgated surface water standards (or equivalent). The Board considers a cumulative excess cancer risk of 1×10^{-6} to 1×10^{-4} and a target Hazard Index of 1.0 to be generally acceptable for human health concerns. The Site is in a commercial industrial area and the property itself will likely remain in commercial/industrial usage for the foreseeable future. Soil screening levels for potential leaching concerns are intended to prevent impacts to groundwater above target groundwater goals (e.g., drinking water standards). Soil screening levels for nuisance concerns are intended to address potential odor and other aesthetic issues.

- b. **Soil Assessment:** In February 2008, a soil gas sampling was performed at the Site. The objective of the soil gas sampling was to determine if there are concentrations of VOCs in the source area soils beneath the existing building that may present a soil vapor intrusion issue to the building's interior areas.

The soil gas samples detected the following pollutants: acetone, benzene, 2-butanone, 1,1,1-TCA, TCE, PCE, and toluene. The concentrations of the detected constituents were compared to shallow soil gas ESLs to evaluate the concerns for potential vapor intrusion (ESL, Table E-2, 2007). Since the Site lies in the area zoned for commercial and industrial land use by the City of Milpitas, the soil gas analytical results were compared with ESLs for commercial and industrial land use. TCE and PCE concentrations in the soil vapor sample collected from boring SV-1 exceeded their respective ESLs.

c. **Groundwater Assessment:**

| Chemicals of Concern | Currently Reported Maximum Concentration (ug/L) | Results of Screening Assessment * | | |
|-----------------------|---|-----------------------------------|-------------------------------|------------------------------------|
| | | Potential Drinking Water Concerns | Potential Indoor-Air Concerns | Potential Aquatic Habitat Concerns |
| TCE | 740 | X | X | |
| PCE | 130 | X | X | |
| <i>Cis</i> -1,2-DCE | 20,000 | X | X | |
| <i>Trans</i> -1,2-DCE | 4.3 | | | |
| Vinyl Chloride | 510 | X | X | |

* Note: an "X" indicates that respective Environmental Screening Level was exceeded

d. **Conclusions:**

Groundwater: Due to risk that will be present at the Site pending full remediation, institutional constraints are appropriate to limit on-site exposure to acceptable levels. Institutional constraints include a deed restriction that notifies future owners of sub-surface contamination and prohibits the use of shallow groundwater beneath the Site as a source of drinking water until cleanup standards are met.

Soil: The soil gas concentrations do not pose vapor intrusion concerns at this time since the soils lie beneath a concrete slab with a partially enclosed structure; the structure has a roof with walls on two sides. In the event of future redevelopment of the property, the vapor intrusion concerns will be re-evaluated based on the proposed development plan. Any soil removal will be performed under a Soil Management Plan, which will be incorporated into the environmental deed restriction for the property.

11. **Feasibility Study:** The Revised Final Remedial Action Plan, dated August 13, 2008, evaluated several remedial alternatives for groundwater at the Site. These included: 1) the no action alternative; 2) monitored natural attenuation (MNA); 3) groundwater extraction and treatment with monitoring/disposal; 4) in-situ ERD with groundwater monitoring, deed restrictions; and, 5) in-situ ERD with groundwater monitoring, MNA, deed restrictions.
12. **Remedial Action Plan:** The recommended remedy for contaminated groundwater at the Site is developed around a framework of three milestone objectives to achieve cleanup standards. The first Short-Term objective is to reduce groundwater concentrations to a

level where vapor intrusion would not be a concern. The Board's residential ESL for potential vapor intrusion concerns is used for this objective. The second Intermediate-Term objective, while not a specific concentration, is a point where natural attenuation processes alone would control migration and reduce pollutant concentrations, thereby achieving cleanup standards within a reasonable period of time. The Final objective is to achieve the groundwater cleanup standards (MCLs).

Applying the three milestones outlined above, the recommended remedy is as follows:

- 1) Continue in-situ ERD injections to actively remediate groundwater concentrations to the Short and Intermediate-Term objectives. Continue groundwater monitoring during this period to evaluate progress and effectiveness of the remedial effort;
- 2) Curtail active remedial measures when pollutant concentrations meet the objectives discussed in item 1 above;
- 3) Following active remediation, begin monitored natural attenuation (MNA) to determine if the in-situ ERD has been effective and to evaluate and validate the ability of natural processes to restore groundwater quality to cleanup standards (Final objective). If significant rebound of concentration or migration of pollutants occurs during the MNA process, additional actions will be proposed by the dischargers.
- 4) At the point where MNA data indicates the plume is stable and shrinking in size, and that natural processes on their own will achieve the Final objective of MCLs in a reasonable timeframe, monitoring will be curtailed.

Additionally, administrative controls will be applied to the Site in order to manage exposure to residual pollutants onsite. These will include an environmental deed restriction and associated soil management plan. For the offsite area, a risk management plan will be developed to monitor groundwater use and other activities that may result in exposure to residual Site pollutants.

13. **Basis for Cleanup Standards**

- a. **General:** State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of

applicable water quality objectives. The previously-cited remedial action plan confirms the Board's initial conclusion that background levels of water quality cannot be restored. This Order and its requirements are consistent with Resolution No. 68-16.

State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This Order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

- b. **Beneficial Uses:** The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Board and approved by the State Water Board, U.S. EPA, and the Office of Administrative Law where required.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels. Groundwater underlying and adjacent to the site qualifies as a potential source of drinking water.

The Basin Plan designates the following potential beneficial uses of groundwater underlying and adjacent to the Site:

- o Municipal and domestic water supply
- o Industrial process water supply
- o Industrial service water supply
- o Agricultural water supply

At present, there is no known use of the impacted zones of groundwater underlying the Site for the above purposes.

- c. **Basis for Groundwater Cleanup Standards:** The groundwater cleanup standards for the Site are based on applicable water quality objectives and are the more stringent of U.S. EPA and California primary maximum contaminant levels (MCLs). Cleanup to this level will protect beneficial uses of groundwater and will result in acceptable residual risk to humans.

14. **Future Changes to Cleanup Standards:** The goal of this remedial action is to restore the beneficial uses of groundwater underlying and adjacent to the Site. Results from other sites suggest that full restoration of beneficial uses to groundwater as a result of active remediation at this site may not be possible. If full restoration of beneficial uses is not technologically nor economically achievable within a reasonable period of time, then the dischargers may request modification to the cleanup standards or establishment of a containment zone, a limited groundwater pollution zone where water quality objectives are exceeded. Conversely, if new technical information indicates that cleanup standards can be surpassed, the Board may decide that further cleanup actions should be taken.
15. **Future Site Redevelopment:** During demolition and redevelopment of former industrial facilities, impacts to soil and groundwater are often encountered. This Site has been well characterized and any impacts that may be encountered during demolition and redevelopment will likely be minimal and restricted to soil. This assessment is based on the fact that TCE and PCE concentrations in the soil vapor sample collected from one out of the five borings (boring SV-1) exceeded their respective ESLs. In the event of future redevelopment of the Site, the vapor intrusion concerns will need to be re-evaluated based on the proposed development plan. Should soil removal/remediation be necessary, a Soil Management Plan would need to be developed, which can be incorporated into the environmental deed restriction for the Site.
16. **Basis for 13304 Order:** California Water Code Section 13304 authorizes the Board to issue orders requiring the dischargers to cleanup and abate waste where the dischargers have caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
17. **Cost Recovery:** Pursuant to California Water Code Section 13304, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order.
18. **CEQA:** The Board, as lead agency for this project, prepared a Initial Study and draft Negative Declaration, which has been circulated for public review in compliance with CEQA and applicable regulations. The Board has considered the Negative Declaration, which reflects the independent judgment and analysis of the Board, and finds based on substantial evidence in the record that the project poses no significant environmental impacts. The Negative Declaration was adopted by the Board on April 8, 2009.
19. **Notification:** The Board has notified the dischargers and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup

requirements for the discharge, and has provided them with an opportunity to submit their written comments.

20. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the dischargers (or their agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.
2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. REMEDIAL ACTION PLAN AND CLEANUP STANDARDS

1. **Implement Remedial Action Plan:** The dischargers shall implement the remedial action plan described in Finding 12.
2. **Groundwater Cleanup Standards:** The following groundwater cleanup standards shall be met in all wells identified in the Self-Monitoring Program:

| Constituent | Standard: Long-Term (ug/l) | Basis |
|--------------------------------|----------------------------------|-------|
| 1,1-Dichloroethane | 5 | MCL |
| 1,2-Dichloroethene | 0.5 | MCL |
| 1,1-Dichloroethene | 6 | MCL |
| <i>Cis</i> -1,2-Dichloroethene | 6 | MCL |

| | | |
|----------------------------------|-----|-----|
| <i>Trans</i> -1,2-Dichloroethene | 10 | MCL |
| Tetrachloroethene | 5 | MCL |
| Trichloroethene | 5 | MCL |
| Vinyl Chloride | 0.5 | MCL |

C. TASKS

1. INSTITUTIONAL CONSTRAINTS – DEED RESTRICTION AND SOIL MANAGEMENT PLAN (ONSITE)

COMPLIANCE DATE: July 31, 2009

Submit technical reports acceptable to the Executive Officer proposing and documenting procedures to be used by the dischargers to prevent or minimize human exposure to soil and groundwater contamination prior to meeting cleanup standards onsite. Such procedures shall include the following:

- a. An environmental deed restriction prohibiting the use of shallow groundwater as a source of drinking water; and
- b. A Soil Management Plan to address soil evaluation and removal/remedial activities, if warranted, during future redevelopment of the Site.

2. RISK EVALUATION/MANAGEMENT PLAN (OFFSITE)

COMPLIANCE DATE: July 31, 2009

Submit technical reports acceptable to the Executive Officer documenting procedures to be used by the dischargers to prevent, evaluate and manage human exposure to Site pollutants in the offsite area. The report will address offsite groundwater use and other activities that may result in exposure to residual Site pollutants (i.e., soil vapor).

3. ANNUAL REPORTING AND IMPLEMENTATION OF INSTITUTIONAL CONTROLS AND SOIL MANAGEMENT PLAN (ONSITE) AND RISK MANAGEMENT/EVALUATION ACTIVITIES (OFFSITE) (as described in Tasks 1 and 2 above)

COMPLIANCE DATE: December 1, 2009 and annually thereafter

Implement the institutional controls and risk management/evaluation activities described in Tasks 1 and 2 above. Submit on an annual basis technical reports acceptable to the Executive Officer documenting continued implementation and compliance. The reports shall include at a minimum the following:

- a. Findings as to the status of groundwater extraction wells installed offsite within the plume area. This will not include groundwater wells for the purposes of remedial investigation;
- b. Risk evaluation/assessment of any proposed redevelopment plan on-site and/or off-site with regards to impacts from residual Site pollution; and,
- c. Description of any proposed soil removal activities onsite in accordance with the Soil Management Plan.

4. **PROPOSE CURTAILMENT OF ACTIVE REMEDIAL MEASURES AND PROPOSE MONITORED NATURAL ATTENUATION PROGRAM**

COMPLIANCE DATE: 60 days prior to proposed curtailment

Submit a technical report acceptable to the Executive Officer containing both a proposal to curtail remediation and a monitoring plan capable of documenting and evaluating natural attenuation processes of pollutants in groundwater. The report must include a rationale as to why it is believed that residual pollutant concentrations can be reduce via natural processes to achieve cleanup standards.

5. **PROPOSED CURTAILMENT OF GROUNDWATER MONITORING**

COMPLIANCE DATE: 120 days prior to proposed curtailment

Submit a technical report acceptable to the Executive Officer containing a proposal to curtail groundwater monitoring. The report must document the effectiveness of natural attenuation processes, by documenting that contaminant concentrations are stable or reducing and contaminant migration potential is minimal. The report shall also contain a risk evaluation of the residual pollutants present. Lastly, the report must also predict when achievement of groundwater cleanup standards will occur.

6. FIVE-YEAR STATUS REPORT

COMPLIANCE DATE: December 31, 2013 and annually thereafter

Submit a technical report acceptable to the Executive Officer evaluating the effectiveness of the approved remedial action plan. The report should include:

- a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment
- b. Comparison of contaminant concentration trends with cleanup standards
- c. Comparison of anticipated versus actual costs of cleanup activities
- d. Performance data (e.g., groundwater volume extracted, chemical mass removed, mass removed per million gallons extracted)
- e. Cost effectiveness data (e.g., cost per pound of contaminant removed)
- f. Summary of additional investigations (including results) and significant modifications to remediation systems
- g. Additional remedial actions proposed to meet cleanup standards (if applicable) including time schedule

If cleanup standards have not been met and are not projected to be met within a reasonable time, the report should assess the technical practicability of meeting cleanup standards and may propose an alternative cleanup strategy.

7. EVALUATION OF NEW HEALTH CRITERIA

COMPLIANCE DATE: 90 days after requested
by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating the effect on the approved remedial action plan of revising one or more cleanup standards in response to revision of drinking water standards, MCLs, or other health-based criteria.

8. EVALUATION OF NEW TECHNICAL INFORMATION

COMPLIANCE DATE: 90 days after requested
by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating new technical information which bears on the approved remedial action plan and cleanup standards for the Site. In the case of a new cleanup technology, the report should evaluate the technology using the same criteria used in the feasibility study. Such technical reports shall not be requested unless the Executive Officer determines that the new information is reasonably likely to warrant a revision in the approved remedial action plan or cleanup standards.

9. **Delayed Compliance:** If the dischargers are delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the dischargers shall promptly notify the Executive Officer and the Board may consider revision to this Order.

D. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
2. **Good O&M:** The dischargers shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Cost Recovery:** The dischargers shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Water Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the dischargers over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.
4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), the dischargers shall permit the Board or its authorized representative:
 - a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.

- b. Access to copy any records required to be kept under the requirements of this Order.
 - c. Inspection of any monitoring or remediation facilities installed in response to this Order.
 - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the dischargers.
5. **Self-Monitoring Program:** The dischargers shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.
6. **Contractor / Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer. Reports and documents that do not contain technical interpretations need not meet this requirement.
7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved U.S. EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g., temperature).
8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
- a. County of Santa Clara
 - b. Santa Clara Valley Water District
- The Executive Officer may modify this distribution list as needed.
9. **Reporting of Changed Owner or Operator:** The dischargers shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.
10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is,

or probably will be, discharged in or on any waters of the State, the dischargers shall report such discharge to the Board by calling (510) 622-2369 during regular office hours (Monday through Friday, 8:00 to 5:00).

A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

12. **Rescission of Existing Order:** This Order supercedes and rescinds Order No. 90-130.
13. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 8, 2009.

Bruce H. Wolfe
Executive Officer

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FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

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Attachments: Self-Monitoring Program
Site Map

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

GREAT WESTERN CHEMICAL COMPANY,
STINNES-WESTERN CHEMICAL CORPORATION AND
GWC PROPERTIES LLC

for the property located at

945 AMES AVENUE
MILPITAS
SANTA CLARA COUNTY

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. *XX-XXX* (site cleanup requirements).

2. **Monitoring:** The dischargers shall measure groundwater elevations annually in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following table:

| Well # | Sampling Frequency | Analyses | Well # | Sampling Frequency | Analyses |
|--------|--------------------|----------|--------|--------------------|----------|
| G-1S | As needed | 8010 | G-42S | A | 8010 |
| G-3S | As needed | 8010 | G-42I | SA | 8010 |
| G-4I | SA | 8010 | G-44S | As needed | 8010 |
| G-5S | SA | 8010 | G-44I | As needed | 8010 |
| G-10I | A | 8010 | G-45S | As needed | 8010 |
| G-14S | As needed | 8010 | G-45I | As needed | 8010 |
| G-18S | SA | 8010 | G-47S | As needed | 8010 |
| G-25S | As needed | 8010 | G-48I | As needed | 8010 |

| | | | | | |
|-------|-----------|------|-------|-----------|------|
| G-26S | As needed | 8010 | G-50I | As needed | 8010 |
| G-28S | As needed | 8010 | G-52S | As needed | 8010 |
| G-29I | As needed | 8010 | G-63S | As needed | 8010 |
| G-37S | As needed | 8010 | G-67S | As needed | 8010 |
| G-28S | As needed | 8010 | E-1I | SA | 8010 |
| G-39S | As needed | 8010 | E-4I | SA | 8010 |
| G-39I | As needed | 8010 | E-6S | As needed | 8010 |
| G-40S | A | 8010 | E-13S | As needed | 8010 |
| G-40I | SA | 8010 | E-13I | As needed | 8010 |
| G-41I | SA | 8010 | E-14I | As needed | 8010 |

Key: 8010 = EPA Method 8010 or equivalent

SA = Semi-Annually

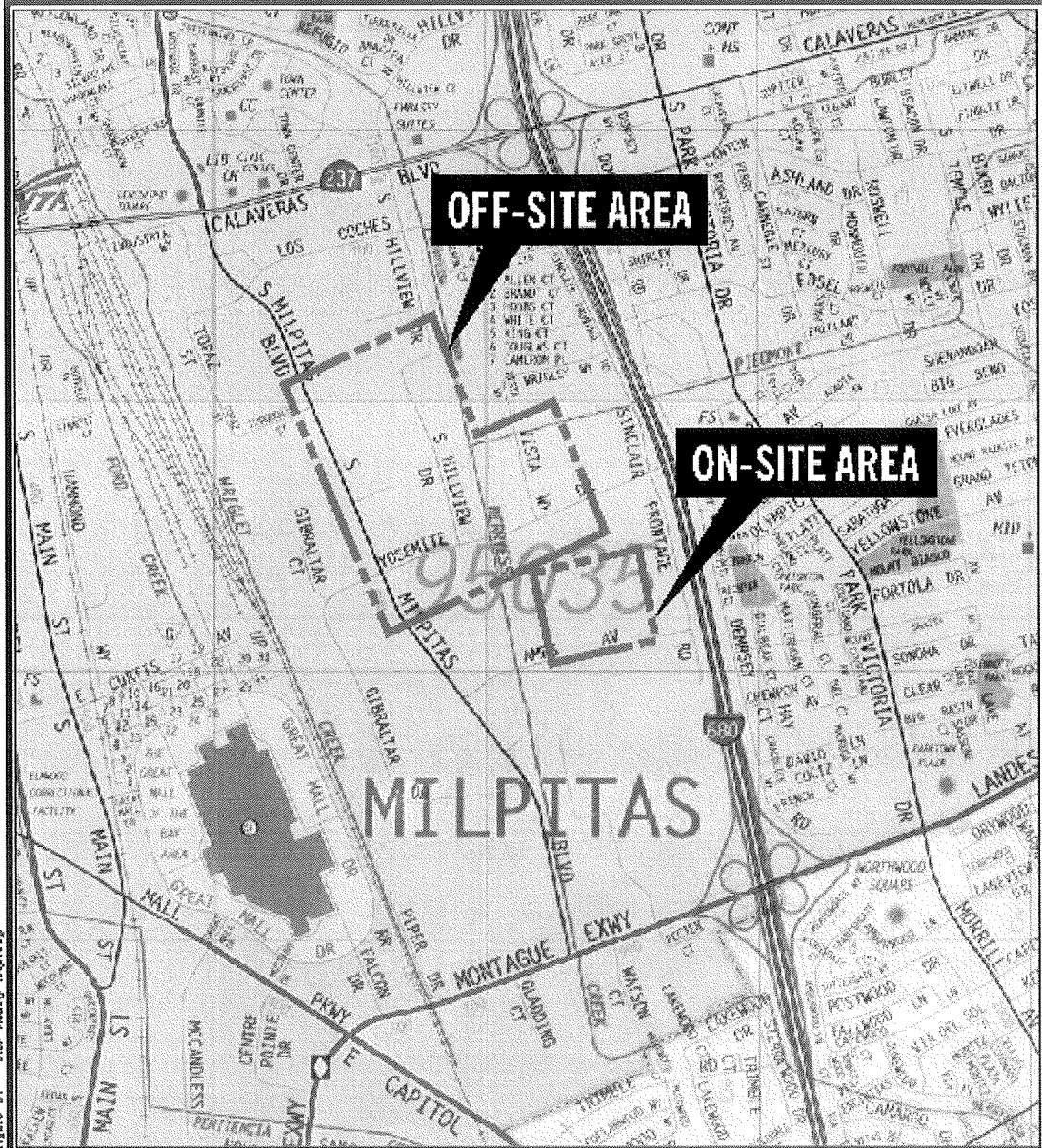
A = Annually

As needed = These wells are not currently scheduled to be sampled, but will be sampled at a later time, as proposed by the dischargers.

The dischargers shall sample any new monitoring or extraction wells quarterly and analyze groundwater samples for the same constituents as shown in the above table. The dischargers may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

3. **Semi-annual Monitoring Reports:** The dischargers shall submit semi-annual monitoring reports to the Board no later than 30 days following the end of the second quarter (e.g., report for first semi-annual period of the year due July 30). The reports shall include:
 - a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by a discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge. This letter shall be included in the second semi-annual report due on January 30 for the previous reporting year, hereafter referred to as the annual report.

- b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map should be prepared for each monitored water-bearing zone in the annual report.
 - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. An isoconcentration map should be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate, and included in the annual report. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).
 - d. **Status Report:** The annual report shall describe relevant work completed during the reporting period (e.g., site investigation, interim remedial measures) and work planned for the following year.
5. **Violation Reports:** If the dischargers violate requirements in the Site Cleanup Requirements, then the dischargers shall notify the Board office by telephone as soon as practicable once the dischargers have knowledge of the violation. Board staff may, depending on violation severity, require the dischargers to submit a separate technical report on the violation within five working days of telephone notification.
6. **Other Reports:** The dischargers shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.
7. **Record Keeping:** The dischargers or their agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.
8. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the dischargers. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.



Source: Thomas Bros. Map

200908172.11482335 01.08mmol.025\08Apr.179mm 01 - Site Vicinity Map.dwg

LEGEND:
 - - - - - Approximate Site Boundary

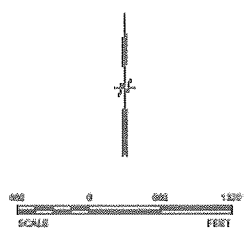


FIGURE 1
SITE VICINITY MAP
FORMER GREAT WESTERN
CHEMICAL COMPANY
MILPITAS, CALIFORNIA



APPENDIX B
(Comments)

Ken Berry 10567 Mariposa Avenue, Jackson, CA 95642 berry-k@sbeglobal.net

December 5, 2008

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, #1400
Oakland, CA 94612

**Re: Former Great Western Chemical Facility
Cleanup and Abatement Order No. [UNIDENTIFIED]**

The San Francisco Bay Regional Water Quality Control Board (R2WB) proposes to approve a Cleanup and Abatement Order (CAO) on its agenda for its regular meeting to be held on January 14, 2009. Approval of the proposed CAO would amend previous CAO No. 90-130.

The proposed action is unlawful because it violates the requirements of the California Environmental Quality Act (CEQA, Public Resources Code (PRC) §21000 and following). In particular, Finding No. 18 of the proposed CAO cites Title 14 of the California Code of Regulations (14 CCR) §15321 as the authority for not preparing an environmental analysis. 14 CCR §15321 is a Categorical Exemption.

However, 14 CCR §15300.2(e) prohibits any categorical exemption from being utilized to avoid preparing an environmental analysis for any site on any list compiled pursuant to Government Code (GC) §65962.5. GC §65962.5(c)(3) requires the listing of any site for which a CAO is issued pursuant to Water Code (WC) §13304 concerning the discharge of hazardous materials. "Hazardous materials" are defined in Health and Safety Code (HSC) §25501(o).

The imperative sentence of the proposed CAO identifies the authority for taking the action as WC §13304.

This comment is submitted pursuant to CEQA and is submitted on my behalf and behalf of the California Citizens for Environmental Justice. Violation of GC §65962.5 and 14 CCR §15300.2 are is long standing and widespread practice of the State Water Resources Control Boards (SWB) and the Regional Water Quality Control Boards (RWBs), of which R2WB is one.

You may call me at 209-223-1769 if you have any questions.

Sincerely,

Ken Berry,
California Citizens For Environmental Justice