

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0131
WASTE DISCHARGE REQUIREMENTS
FOR
WECO AEROSPACE SYSTEMS, INC.
GROUNDWATER TREATMENT AND DISPOSAL SYSTEM
PLACER COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

Weco Aerospace Systems, Inc. (hereafter Discharger) submitted a Report of Waste Discharge dated 16 March 2005, for a proposed groundwater treatment and disposal facility at its Lincoln City manufacturing facility (hereafter referred to as Site) at 1020 Airport Road, Lincoln. The Site consists of a single lot that is part of an industrial subdivision within the Lincoln City limits. The Site is occupied by two buildings, one that is approximately 9,200 square feet and another that is less than 1,000 square feet in area.

The groundwater treatment facility and discharge points are proposed to be located on the Site, across the access road, immediately to the south of the Site buildings. The Site is Assessor's Parcel Number 021-059-011 at township 12N, range 6E, section 7, Latitude 38.9118 and Longitude 121.3574, as shown on Attachment A, which is attached hereto and made part of these Waste Discharge Requirements, hereafter referred to as Order, by reference.

BACKGROUND

1. The Discharger owns and operates a business at the Site that consists of manufacturing and repairing various pieces of equipment and instruments that are used in the aerospace industry. Some of the equipment consists of electronic boards and devices that must be absolutely clean. Past waste disposal from the manufacturing process discharged to on-site leach lines is believed to be the main cause of groundwater contamination detected at the Site. The leach lines are no longer being used for waste disposal. The discharger has eliminated the floor drain in the cleanup room. All waste from the manufacturing process is placed in containers and is disposed of off-site to an appropriate disposal facility. On-site dry wells located along the south side of the Site are currently used for domestic wastewater disposal. An on-site domestic water supply well that serves the Site buildings is located along the southern boundary of the lot.
2. In September of 2001, tetrachloroethene (PCE), 1,2-dichloroethane (1,2-DCA), chloroform and methyl-tert-butyl-ether (MTBE) were detected in a groundwater sample collected near the formerly used leach lines during an environmental assessment. None of those compounds were detected in soil. The on-site domestic water supply well was then sampled and found to contain only low levels of toluene. Between October 2001 and December 2002, the discharger

conducted three phases of investigation to assess the extent of groundwater pollution at the Site resulting in the installation of five groundwater monitoring wells.

3. Groundwater has been measured at depths from 40 to 50 feet below ground surface since monitoring wells were first installed in June 2002. Aquifer tests were conducted and monitoring wells were sampled regularly beginning in 2002 to further evaluate groundwater conditions in the water table aquifer and to determine the potential for impacts to the on-site water supply well. Results indicated the direction of groundwater flow to be predominantly to the southwest. Data suggests that groundwater flows toward the domestic supply well and pumping of the domestic supply well includes water being drawn down from the water table aquifer.
4. During the Second Quarter 2003, the Discharger began taking steps to determine the potential for water to be pumped from one of the monitoring wells as an interim protective measure to prevent impact to the on-site supply well. A granular activated carbon filter was installed as a precautionary measure to treat water being supplied by the onsite water supply well. In February 2004, the discharger conducted pumping tests that showed the monitoring well was not suitable for use as an extraction well. The Discharger submitted a July 2004 *Remedial Action Work Plan* to propose groundwater remediation at the Site, including intercepting and treating groundwater to prevent it from reaching the domestic supply well.
5. The primary contaminants of concern at the Site are volatile organic constituents (VOCs) including 1,2, DCA, PCE, and the fuel oxygenate MTBE. The highest concentrations of VOCs (1,2 DCA at 48 µg/l and PCE at 4.0 µg/l) were detected in ground water samples collected in October 2001 from initial investigation boreholes GP-1 and GP-2 located immediately upgradient and downgradient, respectively, of the main suspected source area, the formerly used leach lines. Additional VOCs, including chloroform, cis-1,2-Dichloroethene (DCE), and trichloroethane (TCE) have historically been detected infrequently in monitoring wells at low concentrations. MW-3 is located immediately upgradient of the on-site water supply well, as shown on Attachment B, which is attached hereto and made part of this Order by reference. The highest concentrations of all constituents of concern are currently detected in MW-3 and MW-5. The concentrations of 1,2-DCA PCE, MTBE in MW-3 and MW-5 have remained relatively stable and slightly declined since June 2002. The Discharger may be required to further evaluate the extent of VOCs in groundwater detected in the area of MW-5 after additional samples from this newest monitoring well are analyzed.

PROPOSED REMEDIATION PROJECT

6. The Discharger proposes to extract and treat impacted groundwater with granular activated carbon and discharge the treated water to land. Approximately six gallons per minute of groundwater will be extracted initially from one extraction well. The Report of Waste Discharge characterizes estimated influent concentrations at less than 6 micrograms per liter (µg/l) 1,2 DCA , less than 1

µg/l PCE, less than 1 µg/l TCE, less than 1 µg/l DCE, less than 1 µg/l Chloroform, and less than 2 µg/l MTBE. Extracted groundwater will be treated with a filter unit, followed by three vessels each containing 200 pounds of liquid phase granular activated carbon, and finally to a discharge holding tank prior to being discharged to land. A HYDROTEK valve will be used to cycle the discharge from the holding tank into four areas of the property. Between each cycle of the discharge pump, the HYDROTEK valve automatically cycles to the next discharge area. Actual discharge to land will be through sprinklers. A berm will be placed around each of the four discharge areas to insure that surface runoff from the discharge areas does not occur. Treatment will achieve levels below discharge requirements for VOCs. (Regional Board staff approved the *Remedial Action Plan* in a letter dated 20 August 2004.) The groundwater extraction and disposal system is shown on Attachment C, which is attached hereto and made part of this Order by reference.

7. The extent of groundwater contamination will be re-evaluated after the groundwater extraction and treatment system has been installed and operated for one year to evaluate system effectiveness. The Site has 5 monitoring wells, which will be sampled regularly to show treatment system effectiveness, the area of hydraulic capture, and cleanup progress. The required constituents and monitoring frequency is detailed in attached Monitoring and Reporting Program (MRP) No. R5-2005-0131. The Discharger will continue the sampling program until the constituents monitored in groundwater have been reduced to below agreed upon cleanup goals or have returned to baseline background concentrations.
8. Once the new treatment system is installed, the Discharger will collect samples from the groundwater influent and the treated water exiting the final treatment vessel at system startup, after -24 hours of operations, weekly for the first month of operation, and from the treated water effluent monthly thereafter

REGULATORY CONSIDERATIONS

9. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives (WQOs), contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Board). Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.
10. Surrounding land uses are agricultural, business, and residential.
11. Surface water drainage is to an unnamed seasonal creek and on to various canals which ultimately flow to the Sacramento River. The beneficial uses of the Sacramento River are municipal and domestic supply; agricultural irrigation and stock watering supply; process and service industrial supply; contact recreation; other noncontact recreation; warm and cold

freshwater habitat; warm and cold migration; warm water spawning; wildlife habitat; and navigation.

12. The designated beneficial uses of underlying groundwater are municipal and domestic supply, agricultural supply, and industrial service and process supply.
13. As described in the Basin Plan, groundwater cleanup goals range between background concentrations to the water quality objectives (WQO), unless background for naturally occurring constituents is higher than the WQO, in which case the cleanup goals are the background concentrations. For this site, the background concentrations are the detection limits, since these compounds are not known to be present upgradient of the site. For WQOs that are not maximum contaminant levels, the WQO is the narrative toxicity objective. Numerical limits cited here implement the objective. The following are the WQOs for VOCs:

Constituent	WQO	Reference
Methyl-t-butyl-ether	5 µg/l	California Department of Health Services Secondary MCL
1,2 dichloroethane	0.4 µg/l	California Public Health Goal in Drinking Water
Cis 1,2-dichloroethene	6.0 µg/l	California Department of Health Services Primary MCL
Trichloroethene	0.8 µg/l	California Public Health Goal in Drinking Water
Tetrachloroethene	0.06 µg/l	California Public Health Goal in Drinking Water
Chloroform	1.1 µg/l	Cal/EPA Cancer Potency Factor as a Drinking Water Level*

* One-in-a-million Incremental Cancer Risk Estimate for Drinking Water

MCL Maximum Contaminant Level

14. Effluent limits for the constituents of concern are set at the detection limit, as a technology-based limit, based on the technology utilized by the treatment system to dependably remove VOCs to concentrations that are less than the practical quantitation limits (PQLs) for laboratory analytical methods for these pollutants.
15. State Board Resolution No. 92-49 (hereafter Resolution No. 92-49) requires the Regional Board to require actions for cleanup and abatement of discharges that cause or threaten to cause pollution or nuisance to conform to the provisions of State Board Resolution No. 68-16 (hereafter Resolution No. 68-16) and the Basin Plan. Pursuant to Resolution No. 92-49, the Regional Board shall ensure that dischargers are required to clean up and abate the effects of discharges in a manner that promotes attainment of either background water quality, or if background levels of water quality cannot be restored, the best water quality which is reasonable and which complies with the Basin Plan including applicable WQOs.
16. Section 13267(b) of California Water Code provides that:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected

of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The technical reports required by this Order and the attached MRP No. R5-2005-0131 are necessary to assure compliance with these WDRs. The Discharger owns and operates the facility that discharged the waste subject to this Order.

17. Issuance of this Order is an action to assure the restoration of the environment and is, therefore, exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), in accordance with Section 15308 and 15330, Title 14, California Code of Regulations (CCR).
18. This discharge is exempt from the requirements of *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Section 20005, et seq. (hereafter Title 27). Section 20090(d) allows exemption for a project to clean up a condition of pollution that resulted from an unauthorized release of waste based on the following:
 - a. The cleanup and abatement action is under the direction of a public agency;
 - b. Wastes removed from the immediate place of release will be discharged according to the Title 27 regulations; and
 - c. The remedial actions intended to contain wastes at the place of release shall implement the Title 27 regulations to the extent feasible.
19. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells, as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the Discharger or county pursuant to California Water Code Section 13801, apply to all monitoring wells.
20. Pursuant to California Water Code Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.
21. All the above and the supplemental data and information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
22. The Discharger and interested agencies and persons were notified of intent to prescribe WDRs for this discharge and provided with an opportunity for a public hearing and an opportunity to submit

written views and recommendations.

23. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that pursuant to Sections 13263 and 13267 of the California Water Code, Weco Aerospace Systems Inc., its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following while conducting the above-described groundwater remediation project.

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991, incorporated herein.]

A. Discharge Prohibitions

1. Discharge of treated groundwater to surface waters or surface water drainage is prohibited.
2. Discharge of waste classified as 'hazardous' under Section 2521 of Title 23, CCR, or as 'designated' under Section 13173 of California Water Code, is prohibited.
3. Discharge of treated groundwater at locations or in a manner different from that described in Finding No. 6 is prohibited.
4. Bypass of overflow of untreated or partially treated groundwater is prohibited.
5. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050.
6. The discharge shall not cause the degradation of any water supply.
7. Full system operation is prohibited until the report required in Provision E.2.a. has been approved by Regional Board staff.

B. Discharge Specifications

1. The Discharger shall operate all systems and equipment to maximize treatment of extracted groundwater and optimize the quality of the discharge.
2. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.

3. Prior to beginning full scale operation of the treatment system, consisting of groundwater extraction from one well, treatment with a filter, and three GAC vessels, the Discharger shall comply as follows:

- a. System Check

Prior to operating the groundwater treatment system with contaminated water, a system check shall be conducted to confirm the proper construction and operation of the treatment system. The following requirements apply to this system check phase.

- i. A conformance inspection shall be conducted to confirm that all equipment, piping, instrumentation, and control system of the interim groundwater remediation system have been installed according to the approved design. Any deficiencies shall be corrected.
- ii. To confirm piping integrity, piping of the collection system, treatment and disposal system shall be pressure tested at 150 percent of the design pressure with potable water. Any leaks shall be repaired.
- iii. All instrumentation, control systems, and equipment shall be inspected for malfunctions. Instrumentation shall be calibrated and operational. All automatic controls, such as shutdown or alarm switches, shall be certified operational. Mechanical equipment such as the transfer pump and air blower will be cycled on and off. Any functional deficiencies shall be corrected.

- b. Prove-out of System

The following requirements apply to this prove-out of system phase.

- i. The prove-out of system phase shall last a minimum of one month.
- ii. The extraction well shall be pumped for at least one hour to confirm that the pump operates properly.
- iii. All extracted groundwater shall be treated by the groundwater treatment facility and discharged to the holding tank and discharge areas.
- iv. All equipment, instrumentation, and alarm/notification systems shall be inspected throughout the duration of the prove-out and certified operational.
- v. All treatment, transport, and disposal components (including pumping valves, liquid level controllers, pipelines, blowers, flow meters, pressure gauges, etc.) shall be inspected for the initial two weeks after start-up of the system, followed by twice weekly inspections for two weeks, weekly inspections for the next two months, and monthly inspections thereafter.
- vi. The Discharger shall evaluate the ability of the treatment system to meet non-detectable levels for VOCs.
- vii. The operation of the groundwater treatment system shall cease at the end of the prove-out period. The Discharger shall not resume operation of the system until the Board

has reviewed the prove-out of system report (Provision E.2.a) and has authorized operation in writing.

c. Full-Scale Operation

The Discharger shall not initiate the full scale operation of the groundwater treatment system until the Regional Board staff has reviewed the prove-out of system report (Provision E.2.a.) and has concurred with full scale operation of the system. The following requirements apply to this full-scale operations phase.

- i. All extracted groundwater shall be treated by the treatment system and discharged to the holding tank and discharge areas.
 - ii. The discharge of treated groundwater to the holding tank and to the ground surface discharge areas shall not exceed their respective capacities.
 - iii. The Discharger shall operate the treatment system to maximize VOC removal.
 - iv. All treatment, transport, and disposal components (including pumping valves, liquid level controllers, pipelines, blowers, flow meters, pressure gauges, etc.) shall be inspected monthly.
 - v. The system's automatic controls, including the alarm/notification and shutdown systems, shall be tested and certified operational on an annual basis.
4. Prior to discharging treated groundwater to the land surface, potable water shall be discharged to the holding tank and to each discharge area to establish the ground surface area's infiltration capacity. The Discharger shall discharge potable water at 50, 100, and 150 percent of the estimated ground surface area infiltration capacity. The ground surface discharge must continue for a minimum of one hour. All leaks and/or malfunctions observed during the potable water test shall be corrected. The Discharger shall not begin discharging treated groundwater to land until the Regional Board has reviewed the potable-water start up summary report (Provision E.2.c.) and approved the land discharge in writing.

C. Groundwater Limitations

1. The discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than background water quality.
2. The Discharger shall not cause the groundwater to contain concentrations of chemical constituents, including any by-products of any treatment process, in amounts above background.

D. Effluent Limitations

1. The effluent shall not have a pH of less than 6.5 or greater than 8.4.
2. The discharge of effluent in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Daily Maximum</u>	<u>Maximum Detection Limit¹</u>
Methyl-tert-butyl-ether	µg/l	<0.5	1.0	0.5
1,2 dichloroethane	µg/l	<0.5	1.0	0.5
Cis 1,2-dichloroethene	µg/l	<0.5	1.0	0.5
Trichloroethene	µg/l	<0.5	1.0	0.5
Tetrachloroethene	µg/l	<0.5	1.0	0.5
Chloroform	µg/l	<0.5	1.0	0.5
Total Volatile Organic Compounds ²	µg/l	<0.5	1.0	0.5
Total Petroleum Hydrocarbons	µg/l	<0.5	1.0	0.5

¹ For nondetectable results

² Total of all VOCs.

3. If the target constituents are detected above the 30-day average concentration limits in Effluent Limitation D.2., the Discharger shall obtain a confirmation sample within 24 hrs. of receiving the results and cease discharging until it can be confirmed the analytical results of the confirmation sample are below the effluent limits listed above. If an exceedence is confirmed, the Discharger shall replace the carbon in all three GAC vessels and retest within 72 hours of restarting the system which shall occur within 60 days of receipt of the confirmed exceedence. If the results of the retest show compliance with effluent limits, treatment system operations may resume.

E. Provisions

1. The Discharger shall notify Regional Board staff a minimum of two weeks prior to the startup of the treatment system and discharge of treated groundwater.
2. All of the following reports shall be submitted pursuant to Section 13267 of the California Water Code. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
 - a. The Discharger shall submit the prove-out of system report for approval at least two weeks prior to the proposed commencement of full-scale operation of the groundwater treatment system. This report shall document compliance with the Discharge Specification B.3.b. In addition, this report shall include a performance evaluation of the groundwater treatment system.

Full-scale operation shall not commence until the Board determines that the proposed system will adequately treat all identified pollutants, comply with waste discharge requirements, and be operated to maximize VOC removal, and that its continued operation is appropriate.

- b. The Discharger shall submit a technical report prior to the end of the fourth month of full-scale operation of the treatment system. The report shall include an analysis of the waste characterization data collected during the first three months of operation, a summary of the data, and a determination if the influent to and/or effluent from the air stripper contains previously unidentified constituents of sufficient magnitude either to pose a threat to water quality and/or to affect the treatment effectiveness of the air stripper. In the event that significant levels of previously unidentified pollutants are detected, the report shall include recommendations on the continued operation of the groundwater treatment system, possible treatment plant modifications, and an assessment of the impacts to the beneficial uses of the receiving water due to the discharge.
 - c. The Discharger shall submit a potable water start-up summary report as described in Discharge Specification B.4, at least two weeks prior to discharging treated effluent to the ground surface. The report shall include discussion of each test with calculated flow rates and hydrostatic tests.
3. The Discharger shall comply with the attached MRP No. R5-2005-0131, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
 4. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
 2. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court order requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
 3. The Discharger shall use the best practicable cost-effective control technique(s) currently available to comply with discharge limits specified in this Order.
 4. The Discharger shall notify the Regional Board and the DTSC within 24 hours of any unscheduled shutdown of the groundwater treatment system.
 5. The Discharger shall report any non-compliance, system shutdown, and/or accidental spill or release of liquid or material verbally to the Regional Board within 24 hours of the spill or

release, and follow-up the verbal notification with written documentation of the spill or release within 14 calendar days of the incident. This documentation shall include the cause of the shutdown or release and the corrective action taken (or proposed to be taken) to restart the system.

6. Prior to any modifications at the Site that would result in material change in the quality or quantity of wastes treated or discharged, or any material change in the location of discharge, the Discharger shall report all pertinent information in writing to the Regional Board for review and approval. WDRs may be revised prior to implementation of any modifications.
7. As described in the Standard Provisions, the Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.
8. The Discharger shall maintain records of all monitoring information including all calibration and maintenance records, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, or report. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Executive Officer.
9. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are to be installed by the Discharger when necessary to achieve compliance with the conditions of this Order.
10. While this Order is in effect, and prior to any change in ownership of the Site or management of this operation, the Discharger shall transmit a copy of this Order to the succeeding Owner/Operator, and forward a copy of the transmittal letter and proof of transmittal to the Regional Board. Transfer of privileges granted under this Order are subject to the discretion of the Executive Officer.
11. The Discharger shall allow the Regional Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the premises regulated by the Regional Board, or the place where records must be kept under the conditions of this Order;
 - b. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

- d. Sample or monitor, at reasonable times, for the purpose of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at this Site.
12. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
13. The Regional Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 16 September 2005.

ORIGINAL SIGNED BY _____
THOMAS R. PINKOS, Executive Officer

Attachments
KAB/JSR: 09/21/05

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2005-0131
CALIFORNIA WATER CODE SECTION 13267
FOR
WECO AEROSPACE SYSTEMS, INC.
GROUNDWATER TREATMENT AND DISPOSAL SYSTEM
PLACER COUNTY

This Monitoring and Reporting Program (MRP) incorporates requirements for monitoring the progress of groundwater remediation and the operation of a proposed groundwater treatment and disposal facility and at the Weco manufacturing facility property located at 1020 Airport Road, Lincoln. Existing data and information about the site show the presence of various chemicals, including the volatile organic compounds (VOCs), tetrachloroethene (PCE), 1,2-dichloroethane (1,2-DCA), chloroform and the oxygenate, methyl-tert-butyl-ether (MTBE). This MRP is issued pursuant to California Water Code Section 13267. Weco Aerospace Systems, Inc. (Discharger) is required to comply with this MRP. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples shall be representative of the volume and the nature of the discharge and matrix of the sampled medium. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

GROUNDWATER REMEDIATION MONITORING

As shown on Attachment B, there are five groundwater monitoring wells, one domestic supply well, and one proposed extraction well. Prior to construction of any new groundwater monitoring or extraction wells, and prior to destruction of any groundwater monitoring or extraction wells, the Discharger shall submit plans and specifications to the Board for review and approval.

The five existing groundwater monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5) are screened at intervals from approximately 40 to 60 feet below ground surface (bgs). These five monitoring wells, the on-site domestic supply well, the proposed extraction well, and any new wells, including extraction wells, installed subsequent to the issuance of this MRP, shall be added to the monitoring program and shall be sampled and analyzed according to the schedule below. Sample collection and analysis shall follow standard EPA protocol.

Sample analysis shall be completed by a State certified laboratory and shall follow standard EPA protocol using the method specified or an equivalent method.

Constituents	EPA Analytical Method ¹	Maximum Practical Quantitation Limit ²	Sampling Frequency
Methyl-tert-butyl-ether	8260B	0.5 ug/l	Quarterly
1,2 dichloroethane	8021B or 8260B	0.5 ug/l	Quarterly
Cis 1,2-dichloroethene	8021B or 8260B	0.5 ug/l	Quarterly
Trichloroethene	8021B or 8260B	0.5 ug/l	Quarterly
Tetrachloroethene	8021B or 8260B	0.5 ug/l	Quarterly
Chloroform	8021B or 8260B	0.5 ug/l	Quarterly
Total Volatile Organic Compounds ³	8021B or 8260B	0.5 ug/l	Quarterly
Total Petroleum Hydrocarbons	8015M or 8260B	0.5 ug/l	Quarterly

¹ Reporting of EPA Method 8021B or 8260B analyses results must include all analytes listed in the method, plus any fuel oxygenates that are detected.

² For nondetectable results. All concentrations between the Method Detection Limit and the Practical Quantitation Limit shall be recorded as trace.

³ Total of all VOCs.

ug/l Micrograms per liter

mg/l Milligrams per liter

Field measured parameters shall follow the schedule below:

Parameters	Units	Type of Sample	Sampling Frequency
Groundwater Elevation	0.01 Feet, Mean Sea Level (msl)	Grab	Every time monitoring wells and extraction well(s) are sampled
Electrical Conductivity	uhmos	Grab	
pH	0.1 units	Grab	

Field testing may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are provided with the appropriate monitoring report.

TREATMENT PERFORMANCE MONITORING

Prior to discharging treated groundwater, the Discharger shall evaluate the treatment system performance. The treatment performance evaluation shall consist of two phases:

- (a) A start-up prove-out, and
- (b) Long-term performance

SYSTEM START UP MONITORING

During the start-up prove-out, the Discharger shall monitor the treated effluent frequently to ensure that volatile organic constituents (VOCs) are removed from the groundwater. The Discharger shall collect samples from the groundwater influent and the treated water exiting the final treatment vessel according to the following schedule:

- (a) At system start-up
- (b) After twenty-four hours of operation
- (c) Weekly for the first month of operation
- (d) At least monthly from the groundwater exiting the final treatment vessel, thereafter

Samples will be analyzed by a State certified laboratory, for volatile organic constituents and fuel oxygenates.”

FULL SCALE SYSTEM OPERATION MONITORING

Effluent Monitoring

After the system prove-out is complete, the Discharger shall begin the long-term performance evaluation by collecting effluent samples and analyzing the samples for the constituents listed below, including pH, specific conductance, and temperature. The Discharger shall collect the samples after the groundwater exits the lead treatment vessel and again after exiting each subsequent canister, just prior to discharge to land. The Discharger shall complete a change-out of both the primary and secondary vessels once breakthrough occurs in the secondary vessel. Effluent samples should be representative of the volume and nature of the discharge. Time of collection of a grab sample shall be recorded. If monitoring results indicate the sample collected after the final treatment vessel exceeds either the monthly average or the daily maximum concentrations, the Discharger shall initiate a confirmation/verification program to determine if an exceedence has occurred. This program shall include collection of a confirmation sample from after the last treatment vessel. Based on the results of the confirmation sample, system modifications and/or additional effluent sampling may be required to assure compliance with this order.

The volume of extracted groundwater and the volumes of groundwater discharged to land shall be provided in quarterly monitoring reports as well as monthly system performance reports.

The effluent samples shall be collected from the exiting sample port of the final treatment vessel prior to discharge for the following analyses:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Total Volatile Organic Compounds ^{1,2}	µg/l	Grab	Monthly	Quarterly
Methyl-tert-butyl-ether	µg/l	Grab	Monthly	Quarterly
1,2 dichloroethane	µg/l	Grab	Monthly	Quarterly
Cis 1,2-dichloroethene	µg/l	Grab	Monthly	Quarterly
Trichloroethene	µg/l	Grab	Monthly	Quarterly
Tetrachloroethene	µg/l	Grab	Monthly	Quarterly
Chloroform	µg/l	Grab	Monthly	Quarterly
Total Petroleum Hydrocarbons	µg/l	Grab	Monthly	Quarterly
Total Volume of Water Treated	Gallons	Continuous	Monthly	Monthly
Flow Rate at Time of Sampling	gpm	Grab	Monthly	Monthly
Average Flow Rate (since last sampling)	gpm	Continuous	Monthly	Monthly

1. Required analytical method shall be either USEPA Method 8260B or 8021B. The maximum detection limits must meet the lowest reporting limit in the Department of Health Services detection limits for purposes of reporting (DLRs).
2. Analysis must include all analytes listed in the method, plus fuel oxygenates which shall be analyzed using USEPA Method 8260B.

Extraction Well Monitoring

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Total Volatile Organic Compounds ^{1,2}	µg/l	Grab	Quarterly	Quarterly
Methyl-tert-butyl-ether	µg/l	Grab	Monthly	Quarterly
1,2 dichloroethane	µg/l	Grab	Monthly	Quarterly
Cis 1,2-dichloroethene	µg/l	Grab	Monthly	Quarterly
Trichloroethene	µg/l	Grab	Monthly	Quarterly
Tetrachloroethene	µg/l	Grab	Monthly	Quarterly
Chloroform	µg/l	Grab	Monthly	Quarterly
Total Petroleum Hydrocarbons	µg/l	Grab	Monthly	Quarterly
Average Extraction Rate (since last sampling)	Gpm	Continuous	Monthly	Monthly
Pressure at Time of Sampling	Psig	Grab	Monthly	Monthly
Water Level	0.01 feet msl	Grab	Monthly	Monthly

1. Required analytical method shall be either USEPA Method 8260B or 8021B. The maximum detection limits must meet the lowest reporting limit in the Department of Health Services detection limits for purposes of reporting (DLRs).
2. Analysis must include all analytes listed in the method, plus fuel oxygenates which shall be analyzed using USEPA Method 8260B.

REPORTING

In reporting monitoring data, the Discharger shall submit hard copies of all documents and data submittals to the Regional Board. The Discharger shall arrange the data in tabular form so that the date, sample type, and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP shall also be reported to the Regional Board. In addition, the Discharger shall notify the Board within 24 hours of any unscheduled shutdown of the groundwater extraction system.

Pursuant to Title 23, Division 3, Chapter 30, Article 2, Sections 3890-3895 of the California Code of Regulations, effective January 1, 2005, the discharger shall submit the following information electronically to the State Water Resources Control Board's GeoTracker database:

1. All chemical analytical results for soil, water, and vapor samples.
2. The latitude and longitude of any permanent sampling point for which data is reported, accurate to within 1 meter and referenced to a minimum of two reference points from the California Spatial Reference System, if available.
3. The surveyed elevation relative to a geodetic datum of any permanent sampling point.
4. The elevation of groundwater in any permanent monitoring well relative to the surveyed elevation.
5. A site map or maps showing the location of all sampling points.
6. The depth of the screened interval and the length of screened interval for any permanent monitoring well.
7. PDF copies of boring logs.
8. PDF copies of all reports, workplans, and other documents, including the signed transmittal letter and professional certification by a California Licensed Civil Engineer or a Registered Geologist.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional or their subordinate and signed by the registered professional.

A. Monthly Operation Reports

The Discharger shall submit to the Regional Board monthly operation reports by the 1st day of the second month following sampling (i.e., the January Report is due by 1 March). These operation reports shall contain a summary of the results of monitoring, including effluent and discharge flow rates, volume of treated water, pressure readings, and water levels, operation and maintenance activities for that month, and a summary of any shutdown and/or spill events that occur that month.

B. Quarterly Monitoring Reports

Quarterly reports shall be submitted to the Regional Board on 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)**. At a minimum, the reports shall include:

1. A summary of all influent and effluent treatment system performance monitoring data;
2. Results of groundwater monitoring, including a narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring event. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well and an analysis of trends in the concentrations of pollutants, documenting depth to groundwater; parameters measured before, during, and after purging; calculation of casing volume; total volume of water purged, etc.;
3. Groundwater contour maps for all groundwater zones;
4. A scaled map showing relevant structures and features of the facility, the injection grid, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum;
5. A comparison of the monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. A table showing well construction details such as well number, groundwater zone being monitored, coordinates (longitude and latitude), ground surface elevation, reference elevation, elevation of screen, elevation of bentonite seal, elevation of filter pack, and elevation of well bottom;
7. A narrative discussion of the analytical results for all groundwater locations monitored, including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
8. Copies of all laboratory analytical report(s);
9. Cumulative data tables containing the water quality analytical results and depth to groundwater;
10. If applicable, the reasons for and duration of all interruptions in the operation of any remediation system, and actions planned or taken to correct and prevent interruptions.

C. Annual Report

An Annual Report shall be submitted to the Regional Board by **1 February** of each year. This report shall contain an evaluation of the effectiveness and progress of the remediation, and may be submitted with the fourth quarter monitoring report. The Annual Report shall contain the following minimum information:

1. Tabular and graphical summaries of all data collected during the previous year;
2. Groundwater contour maps and contaminant concentration maps containing all data obtained during the previous year;
3. Graphical presentation of concentrations of groundwater pollutants and data from monitoring and analysis performed during the entire year;
4. A discussion of compliance and the corrective action taken, if any, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
5. A discussion of the long-term trends in the concentrations, fate and transport of the pollutants in the groundwater monitoring wells;
6. A discussion of any data gaps, potential deficiencies/redundancies in the monitoring system or reporting program.
7. An evaluation of the performance of the groundwater treatment system, including a description of all remedial activities conducted during the year, an analysis of their effectiveness in removing the pollutants and whether the plume of pollutants and pollutant breakdown products is being captured by the extraction system or is continuing to spread, as well as a forecast of the flows anticipated in the next year;
8. An evaluation of the operation of the groundwater treatment system, including cumulative information on the mass of pollutant removed from the subsurface, system operating time, and any field notes pertaining to the operation and maintenance of the system;
9. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements; and
10. A discussion of any data gaps, potential deficiencies/redundancies in the monitoring system or reporting program and the anticipated date for completion of cleanup activities.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the

Discharger, or the Discharger's authorized agent, as described in the Standard Provisions
General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program as of the date of the Order.

Ordered by: ORIGINAL SIGNED BY
THOMAS R. PINKOS, Executive Officer

16 September 2005
(Date)

KAB

INFORMATION SHEET

ORDER NO. R5-2005-0131
WECO AEROSPACE SYSTEMS INC.
LINCOLN CITY MANUFACTURING FACILITY
GROUNDWATER TREATMENT AND DISPOSAL SYSTEM
PLACER COUNTY

Weco Aerospace Systems, Inc. (Discharger) is the current owner of the site located at 1020 Airport Road (Site). The Discharger owns and operates a business at the Site that consists of manufacturing and repairing various pieces of equipment and instruments that are used in the aerospace industry. Some of the equipment consists of electronic boards and devices that must be absolutely clean. In the past, spillage wastewater containing solvents, fuels, and acids from washing of aerospace parts at the facility drained into a cleanup room floor drain which discharged to on-site leach lines. After the Discharger was informed of groundwater contamination at the site, the floor drain was plugged and use of the leach lines was discontinued. All metalizing wastes, paint waste, and other incidental one time use/expired containers are now placed in proper containers and disposed of off-site to an appropriate disposal facility. Weco has one self-contained Safety-Kleen spray gun cleaner and one parts washing tank. Both Safety-Kleen systems are maintained and serviced by the manufacturer. On-site dry wells located along the south side of the Site are currently used for domestic wastewater disposal. An on-site domestic drinking water supply well that serves the Site buildings is located along the southern boundary of the lot.

In 2001, tetrachloroethene (PCE), 1,2-dichloroethane (1,2-DCA), chloroform and methyl- tert-butyl-ether (MTBE) were detected in a groundwater sample collected near the formerly used leach lines during an environmental assessment. No pollutants were detected in soil. The on-site domestic water supply well was then sampled and found to contain only low levels of toluene.

Between 2001 and 2002, investigations were performed to assess the vertical and lateral extent of groundwater pollution resulting in the installation of four monitoring wells to depths of approximately 60 feet. In 2002, aquifer slug tests were performed on the four monitoring wells to determine the hydraulic conductivity and transmissivity of the aquifer in which they are completed. Because there are downgradient supply wells in the area that could be impacted by dissolved pollution from the site, a request was made of the Department of Water Resources (DWR) for logs of those wells along with a log of the onsite water supply well. The wells logs provided by DWR did not include the onsite well or three nearby wells. Logs for wells located on two parcels approximately 1,500 and 2,500 feet to the southwest of the site were evaluated. Each of these wells was found to be 110 feet deep and were reported to be at no risk of impact from dissolved pollution detected at the site. In November 2002, three additional boreholes and one additional monitoring well were installed to further evaluate any potential soil pollution and confirm the direction of groundwater flow.

Regular groundwater monitoring has been conducted at each monitoring well and the on-site water supply well since 2001. Groundwater has been first encountered at depths ranging from 40 to 50 feet below ground surface and flows southwest. The primary pollutants of concern at the Site are the volatile organic compounds (VOCs) including 1,2, DCA, PCE, and the oxygenate MTBE. The highest concentrations of VOCs (1,2 DCA at 48 µg/l and PCE at 4.0 µg/l) were detected in water samples collected in October 2001 from initial investigation boreholes GP-1 and GP-2 located immediately upgradient and downgradient, respectively, of the main suspected source area, the formerly used leach lines. Additional VOCs, including chloroform, cis-1,2-dichloroethene (DCE), and trichloroethane (TCE) have historically been detected infrequently in monitoring wells at low

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WECO AEROSPACE SYSTEMS INC.
LINCOLN CITY MANUFACTURING FACILITY
GROUNDWATER TREATMENT AND DISPOSAL SYSTEM
PLACER COUNTY

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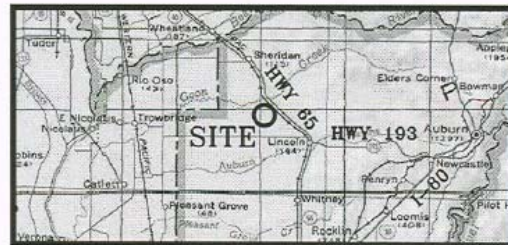
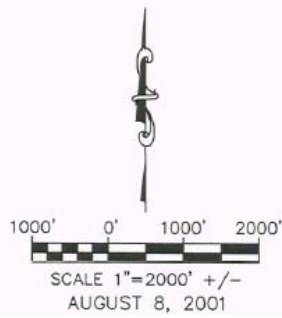
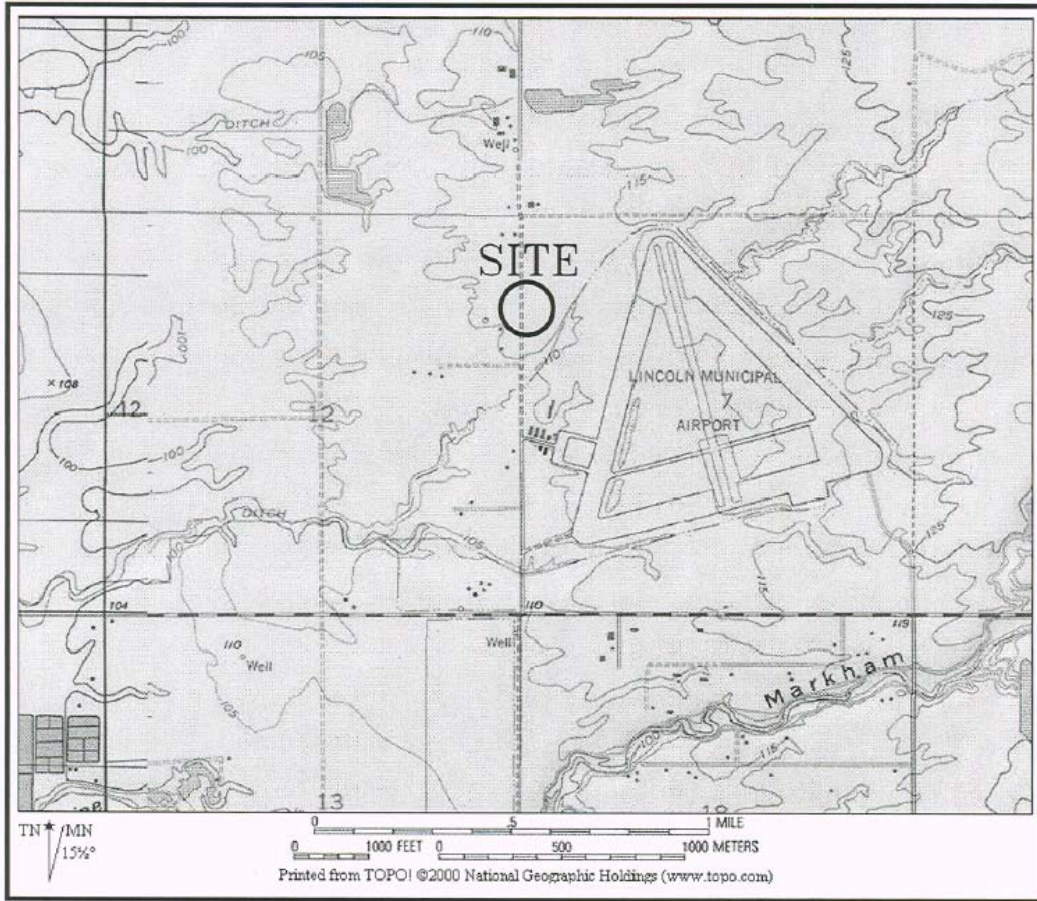
concentrations. The highest concentrations of all constituents of concern are currently detected in MW-3 and MW-5. MW-3 is located immediately upgradient of the on-site water supply well. The concentrations of 1,2-DCA PCE, MTBE in MW-3 and MW-5 have remained relatively stable and slightly declined since June 2002.

Water level data from monitoring wells indicated that the water table aquifer is influenced by water supply well pumping. The Discharger began evaluating and taking steps to implement protective measures to assure that the water from the on-site water supply well would be safe for domestic use. In June 2002, in coordination with the Placer County Department of Health, the Discharger placed an appropriately sized granular activated carbon filter in-line with the domestic well. Because VOCs were detected in the monitoring well (MW-3) located only 30 feet upgradient of the on-site domestic water supply well, additional pump tests were performed in 2003 to evaluate the possible use of this well as an extraction well to intercept and treat contaminated shallow groundwater to protect against impact to the supply well, as well as, an interim groundwater remedial action.

Results presented in the *Quarterly Monitoring Reports Fourth Quarter 2003, and First Quarter 2004 and Report of Pumping Test*, dated 15 April 2004, indicated that MW-3 was not suitable as an extraction well. The Discharger proposes to extract and treat impacted groundwater with granular activated carbon and discharge the treated water to land. Regional Board staff approved the *Remedial Action Plan*, including the proposed placement of an extraction well and treatment of extracted ground water, in a letter dated 20 August 2004.

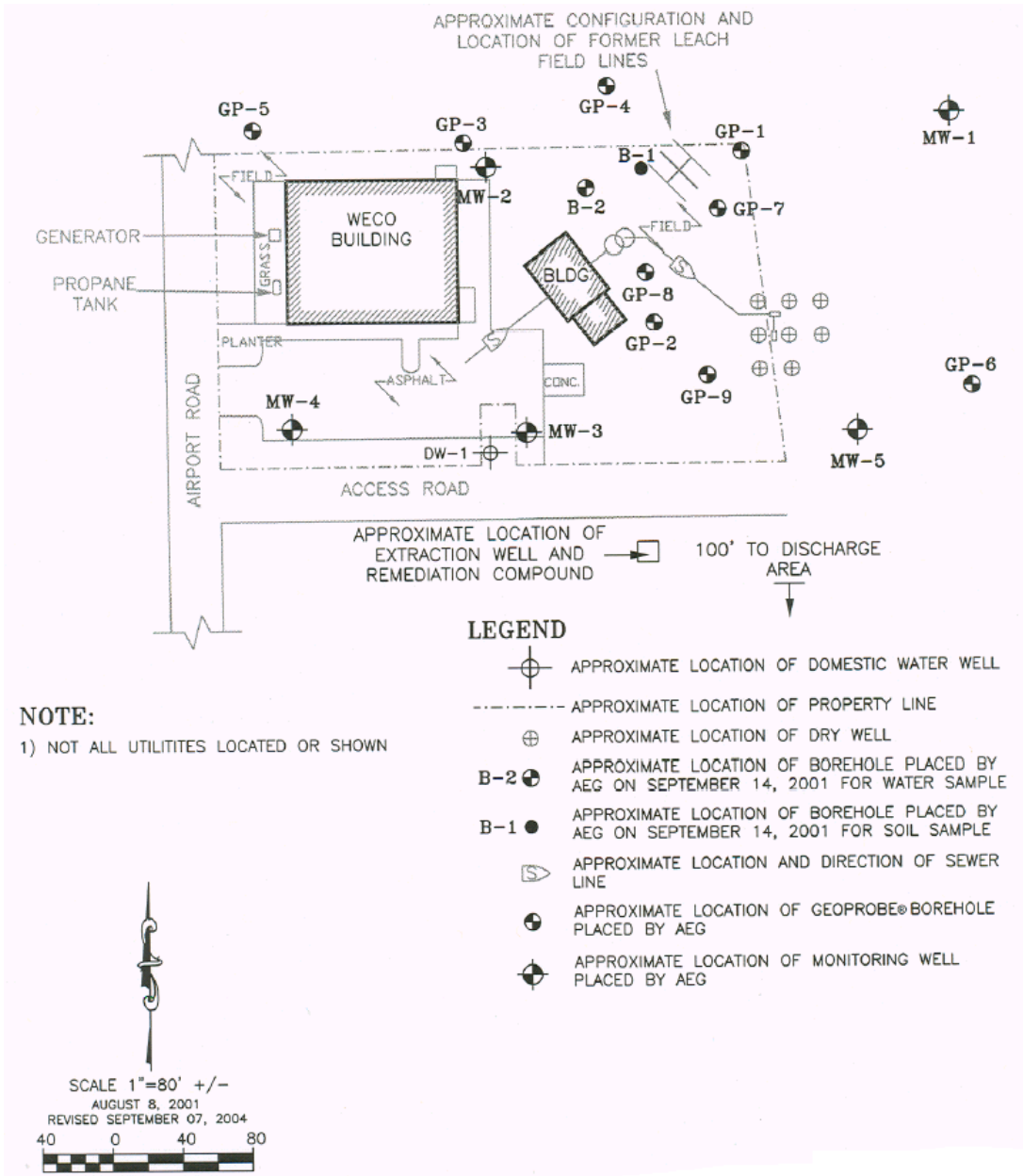
The Discharger submitted a Report of Waste Discharge dated 16 March 2005. Approximately six gallons per minute of groundwater will be extracted initially from one extraction well. The Report of Waste Discharge characterizes estimated influent concentrations at less than 6 micrograms per liter ($\mu\text{g/l}$) 1,2 DCA, less than 1 $\mu\text{g/l}$ PCE, less than 1 $\mu\text{g/l}$ TCE, less than 1 $\mu\text{g/l}$ DCE, less than 1 $\mu\text{g/l}$ Chloroform, and less than 2 $\mu\text{g/l}$ MTBE. Extracted groundwater will be treated with a filter unit, followed by three vessels each containing 200 pounds of liquid phase granular activated carbon, and finally to a discharge holding tank prior to being discharged to land. A HYDROTEK valve will be used to cycle the discharge from the holding tank into four areas of the property. Between each cycle of the discharge pump, the HYDROTEK valve automatically cycles to the next discharge area. Actual discharge to land will be through sprinklers. A berm will be placed around each of the four discharge areas to insure that surface runoff from the discharge areas does not occur. Treatment will achieve levels below discharge requirements for VOCs. The Discharger may be required to further evaluate the extent of VOCs in groundwater detected in groundwater and to determine what additional actions are necessary to complete the cleanup at the site after additional samples from the newest monitoring well and operation of the proposed extraction well are analyzed.

Attachment A



NOT TO SCALE

Attachment B



Attachment C

