CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 93-037

WASTE DISCHARGE REQUIREMENTS FOR:

INDUSTRIAL ASPHALT AND CALMAT

FOR THE PROPERTY LOCATED AT:

52 EL CHARRO ROAD
PLEASANTON
ALAMEDA COUNTY

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

1. Industrial Asphalt and CalMat, hereinafter called the dischargers, by application dated May 1992, August 12, 1992, September 28, 1992, and amended by letters dated January 5, 1993, and February 2, 1993, have applied for issuance of waste discharge requirements for discharge/reinfiltration of treated extracted groundwater. An estimated flow of between 31,000 and 51,000 gallons per day (gpd) of treated groundwater will be discharged to Pond R4 and/or recharged to the groundwater via Pond R4. This Order is intended to regulate discharge/recharge of the treated groundwater.

2. Industrial Asphalt (IA), a division of CalMat (CM), currently operates an asphalt manufacturing plant on part of a 177 acre parcel owned by CM. IA started its operation at this site in 1963. The IA site is located at 52 El Charro Road, Pleasanton, Alameda County. CM, the current property owner, is called a discharger and will be responsible for compliance only in the event that IA fails to comply with this Order. CM harvests and processes sand and gravel at an adjacent site. Pond R4 is located on this adjacent site.

3. From 1963 to 1986, IA operated eight underground storage tanks (USTs) for storage of asphalt and diesel fuel (used as burner fuel in the asphalt batch plant). All eight tanks were removed in 1987. Currently there are no underground tanks at the IA facility. After 1984, natural gas replaced diesel fuel to feed the burners and asphalt is trucked to the site. During the USTs removal in 1987, free product was discovered and recovered from the bottom of the UST cavity and disposed of offsite. Analysis of the free product indicated that the free product contained polychlorinated biphenyls (PCBs) at 12 parts per million (ppm). Subsurface investigations have been conducted by IA since 1987. Groundwater samples have detected total petroleum hydrocarbons as diesel (TPH-d) concentrations as high as 1100 ppm, TPH as waste oil as high as 330 ppm, oil and grease concentrations as high as 360 ppm, and PCB concentrations as high as 62 ppb (parts per billion). The extent of groundwater and soil contamination beneath the site has been described and illustrated in the following Kleinfelder Inc. reports: "Remedial Investigation (RI) Report for Industrial Asphalt, Pleasanton, California," dated December 28, 1990 and

"Feasibility Study for Soil and Ground Water Remediation, Industrial Asphalt, Inc., 52 El Charro Road, Pleasanton, California," dated August 14, 1991.

4. IA has proposed installing a groundwater extraction, treatment and reinfiltration system to control migration of polluted groundwater. The proposed treatment system consists of (a) eleven extraction wells to pump groundwater, (b) an oil/water separator to reduce the TPH concentrations to below 10 ppm, (c) filters to remove sediments, (d) a UV-lamp sterilizer to reduce biological fouling, (e) three granular activated carbon vessels (in series), and (f) piping to transport the treated groundwater for discharge to Pond R4.

5. Pond R4 is used by CM for storage of groundwater extracted from active quarry pits and for groundwater used to wash clays from aggregates being processed. Pond R4 is located less than 100 feet from the IA facility. R4 is about 140 feet deep and has a surface area of about sixteen acres. The estimated capacity of R4 is about 200 million gallons. Some of the water in R4 is expected to be recharged to the groundwater. As the water level in R4 rises, water may be discharged to Arroyo Mocho, a tributary of Alameda Creek. The last discharge occurred in March 1986, when a total of 130,000 gpd was released. Discharge to Arroyo Mocho is regulated by an existing NPDES permit (Permit No. CA0027821) issued by the Board. Discharge to Arroyo Mocho is not expected to adversely impact beneficial uses because IA's treatment system should remove most and possibly all pollutants of concern and because IA's discharge to Pond R4 will be diluted by large amount of water. The existing NPDES Permit will be modified in the future to reflect IA's discharges to Pond R4.

6. The dischargers have considered the feasibility of reclamation, reuse, and discharge to a publicly owned treatment works (POTW), as specified in Board Resolution No. 88-160. The dischargers have determined that reuse is feasible and proposes to operate the reinfiltration system described in Finding 5 above. Regional Board staff concurs with the proposed reuse plan.

7. The dischargers have proposed submitting an Operations and Maintenance (O & M) Manual after the treatment system design is completed and the treatment system installed. This manual will be finalized during the first year of operations.

8. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, as well as several subsequent amendments. The Basin Plan contains water quality objectives for Alameda Creek, Alameda Creek Quarry Ponds, and the underlying groundwater. The existing and potential beneficial uses of Alameda Creek and Alameda Creek Quarry Ponds are:

   a. agricultural supply
   b. groundwater recharge
   c. water contact and non-contact recreation
   d. warm and cold fresh water habitat
   e. wildlife habitat
   f. fish migration and spawning

9. The existing and potential beneficial uses of the underlying groundwaters are:

   a. municipal and domestic supply
   b. industrial process and service supply
   c. agricultural supply

10. The Basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin". The discharger's proposed groundwater extraction, treatment and infiltration system and associated operation, maintenance, and monitoring plans constitute an acceptable control program for minimizing the discharge of toxicants to waters of the State.

11. The Basin Plan also prohibits discharge to Alameda Creek, including its tributaries, during the dry weather period (May 1 through October 31 of each year).

12. Effluent limitations of this Order are based on the Basin Plan, State and U. S. Environmental Protection Agency (EPA) plans and policies, best professional engineering and geologic judgement, and best available technolgy economically achievable (BATEA). For a discharge to a recharge area, the Board usually specifies effluent limitations based on Maximum Contaminant Levels (MCLs) or BATEA, whichever is lower. If BATEA can achieve effluent quality close to zero, effluent limits will usually be set at or close to the method detection limit.

13. This project constitutes a minor modification to land and such activity is thereby exempt from the provisions of the California Environmental Quality Act in accordance with Section 15304, Title 14, of the California Administrative Code.

14. The dischargers are not required to comply with the Underground Injection Control Program (40 CFR Part 144) because the depth of the percolation ponds does not exceed the largest surface dimension.

15. The Board has notified the dischargers and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

16. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Industrial Asphalt and CalMat, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder shall comply with the following:

A. <u>EFFLUENT LIMITATIONS</u>

1. Purge water generated during groundwater sampling at the IA site may be introduced into the groundwater treatment system.

2. Upon adoption, the effluent from the treatment system and the water discharged to Arroyo Mocho shall not contain constituents in excess of the following INSTANTANEOUS MAXIMUM LIMITS:

Constituents	Effluent Limits (ug/l)
Carbon Tetrachloride	0.5
1,2-Dichloroethane	0.5
Vinyl Chloride	0.5
Benzene	1.0
Total Volatile Organic Compounds	5.0
Total Petroleum Hydrocarbons as diesel (as identified by modified EPA Method 8015)	50.0
Total Petroleum Hydrocarbons as waste oil	100
Total Oil and Grease	500
Polynuclear Aromatic Hydrocarbons (PAHs, per constituent)	0.1/0.2/3.0 (a)
Total Polychlorinated Biphenyls	0.5

(a) 0.1 ppb for benzo(a)anthracene, 0.2 ppb for each of the other PAHs which has primary MCL values, and 3.0 ppb for each of the PAHs which has no primary MCL values

3. The pH of the discharges shall not exceed 8.5 nor be less than 6.0 if the discharge does not receive a minimum dilution of 10:1. If the discharge does receive a minimum dilution of 10:1, the pH shall not exceed 9.0 nor be less than 6.0.

4. The dischargers shall report any other organic constituents identified during any required analyses, or in the course of other site investigations, that may be or become a constituent in the purge or extracted groundwater regulated by this Order.

B. PROHIBITIONS

1. The treatment, storage and discharge of treated waste groundwater shall not create a nuisance as defined in Section 13050(m) of the California Water Code, nor degrade the quality of any useable groundwater.

2. There shall be no bypass or overflow of untreated, partially treated or inadequately treated polluted groundwater to waters of the State from the dischargers' wastewater collection, treatment or distribution facilities.

3. No waste groundwater shall be allowed to escape from the designated disposal area(s) as either surface flow or as airborne spray nor be disposed of to an area other than that stipulated in this Order, except as pursuant to an approved contingency plan.

4. The discharge of waste other than treated groundwater, derived onsite from the extraction system or groundwater sampling purge water, as defined in this Order, is prohibited.

5. For treated waste groundwater discharged to Pond R4:

   a. A minimum of three feet of freeboard shall be maintained in Pond R4 at all times to prevent the threat of overflow.

   b. Pond R4 shall be adequately protected from erosion and washout which may result from a rainfall event having a predicted frequency of once in 100 years.

C. PROVISIONS

1. The dischargers shall comply with all sections of this Order upon adoption by the Board and upon starting any discharge.

2. The dischargers shall comply with the Self-Monitoring Program as adopted by the Board and as may be amended by the Executive Officer.

3. The dischargers shall notify the Regional Board if any activity has occurred or will occur which would result in the discharge, on a frequent or routine basis, of any toxic pollutant which is not limited by this Order.

4. This Order may be modified by the Board to include effluent or receiving water limitations for toxic constituents determined to be present in significant amounts in the discharge regulated by this Order.

5. Any discharge to a location other than the discharge point(s) specified in this Order will require a modification to this Order or submission of a second WDR application.

6. The dischargers shall maintain a copy of this Order at the site so as to be available at all times to site operators.

7. The dischargers shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the dischargers to achieve compliance with the conditions in this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Order. All systems, both those in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of the inspection results and maintenance performed and made available to the Regional Board. All of the above procedures shall be described in an Operation and Maintenance (O & M) Manual. The O & M Manual shall also contain a description of the safeguards to assure that, should there be reduction, loss, or failure of electric power, the dischargers will be able to comply with the terms and conditions of this Order. The O & M Manual shall

describe preventive (fail-safe) and contingency (cleanup) plans for controlling accidental discharges, for actions to be taken if the effluent from the treatment system fails to meet the requirements contained in this Order, for actions to be taken if water discharged from Pond R4 to Arroyo Mocho fails to meet the requirements contained in this Order, and for minimizing the effect of such events. These plans shall identify the possible sources of accidental loss, untreated or partially treated waste bypass, and polluted drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of treatment equipments, tanks and pipes shall be considered. The dischargers shall submit an O & M Manual that is acceptable to the Executive Officer within one year of treatment system startup.

8. The dischargers shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986 except Items B.2, B.3, C.8 and C.11. Item C.10(b)(C) shall be modified by substituting instantaneous maximum for maximum daily.

9. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

10. The Board will review this Order periodically and may revise the requirements when necessary.

I, Steven R. Ritchie, 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 21, 1993.

STEVEN R. RITCHIE
Executive Officer

Attachments: Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

INDUSTRIAL ASPHALT AND CALMAT
52 EL CHARRO ROAD, PLEASANTON, ALAMEDA COUNTY

WASTE DISCHARGE REQUIREMENT ORDER NO. 93-037

CONSISTS OF

PART A (dated December 1986 Mod. SBTD 1/23/87)

AND

PART B

PART B

SELF MONITORING PROGRAM FOR INDUSTRIAL ASPHALT AND CALMAT

A. Start Up Phase and Reporting

1. The Board's Executive Officer shall be notified in writing of the date of start up within 7 to 14 days before start up begins.

2. During the original start up for the treatment system, sampling of the effluent must occur on the first and fifth day. On the first day of the original start up, the system shall be allowed to run until at least three to five well volumes are removed and until three consecutive readings for pH, conductivity, and temperature are within five percent of each other; then, the influent and effluent shall be sampled and submitted for analyses. Prior to receipt of the results of the initial samples, all effluent shall be discharged into a holding tank (that is contained, not discharged to the receiving water) until the results of the analyses show the discharge to be within the effluent limits established in this Order. The treatment system may be shut down after the first day's sampling to await the analytical results and, thereby, reduce the amount of storage needed. For the stored effluent, if the results of the analyses show the discharge to be in violation, the effluent shall: (1) be retreated until the retreated effluent is in compliance, or (2) be disposed in accord with the provisions of Chapter 15, Title 23, California Code of Regulations.

   If the first day's sampling shows compliance, the treatment system shall be operated for a total of five days and be sampled again. While the fifth day's samples are being analyzed, the effluent may be discharged to the receiving water as long as the analyses are received within 96 hours of sampling, and then, continue to be discharged to the receiving water if the analyses show compliance. If the treatment system is shut down more than 96 hours during the original start up (awaiting analyses results, etc.), the original start up procedures and sampling must be repeated.

   A report on the start up phase shall be submitted to the Regional Board that presents the results of the laboratory analyses, flow rates, chain of custody forms, and describes any changes or modifications to the treatment system. This report shall be submitted to the Regional Board no more than fifteen days after the end of the start up phase.

B. Specifications for Sampling and Analysis

1. The dischargers are required to perform sampling and analysis at the points listed below and according to the schedule in Table 1.

2. Description of Sampling Stations:

   I-1 At a point after groundwater extraction and immediately prior to discharge into the treatment system.

E-1	At a point in the treatment system after the first carbon unit but before the second carbon unit.
E-2	At a point in the treatment system after the second carbon unit but before the third carbon unit.
E-3	At a point after full treatment but before it is discharged to Pond R4.
C-1	At a point one foot below the water surface, no less than two feet from the bank of Pond R4.
C-2	At a point just prior to discharge to Arroyo Mocho.

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TABLE 1

	I-1 & E-1 or E-2 or E-3 (1)	C-1	C-2 (2)
Treated groundwater flow rate (gallons/day)	Continuous		
Freeboard (feet)		D	
All applicable standard observations	M	M	M
VOCs (EPA 8240 or equivalent) (3)	D/W/M/Q	I/Y & V	Y & V
TPH as diesel and as waste oil (modified EPA 8015 or equivalent)	D/W/M/Q	I/Y & V	Y & V
Total Oil & Grease (EPA 5520 or equivalent)	D/W/M/Q	I/Y & V	Y & V
PAHs (EPA 610 or equivalent)	I/Y	I/Y & V	Y & V
PCBs (EPA 8080 or equivalent)	D/W/M/Q	I/Y & V	Y & V
Nitrate	D/Y		
pH, units	D/W/M/Q	I/Y & V	Y & V
Priority pollutant metals (4)	I/Y		

D = daily
M = monthly
Y = yearly
D/W/M/Q = Once during the first and fifth day of startup, then weekly for six weeks, then monthly for three months, then quarterly
I/Y = initially upon commencement of discharge to Pond R4, then yearly
V = Sampling shall be performed within 24 hours whenever the effluent (E-3) is in violation.

(1) If analytical results of samples from E-1 exceeds effluent limitations listed in this Order, E-2 samples are to be taken and analyzed immediately. Analytical results are to be known within 96 hours of sampling. If analytical results of samples from E-2 exceed effluent limitations specified in this Order, E-3 samples will be taken and analyzed immediately. E-3 analytical results are to be known within 96 hours of sampling. Results from either E-1, E-2, or E-3 can be used to determine compliance with this Order.

(2) Samples or observations are to be taken on the first day of each month/year when discharge to Arroyo Mocho occurs. Samples are to be analyzed immediately and analytical results known within 96 hours of sampling.

(3) Concentrations of the ten largest peaks in the chromatogram other than the priority pollutants listed in the method shall be identified.

(4) antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc. The maximum method detection limit shall be 10 ug/l each.

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C. Reports to be Filed with the Regional Board

1. Self-Monitoring Reports

Written reports shall be filed regularly for each calendar quarter, and shall be submitted by the last day of the month following the quarter.

2. Quarterly reports shall include:

a) Letter of Transmittal - A letter transmitting each self-monitoring report shall include any requirement violations occurring during the last report period, and actions taken or planned for correcting the violations. If no violations have occurred in the current report period this shall be stated in the letter of transmittal. Include reference to past reporting violations and corrective measures taken.

b) Data - All monitoring and operational data is to be submitted in tabular form, and should include at least the following:

i) Table 1 Results - including flowrate and sampling analytical results. Table 1 results shall be presented by station, date and type of sample.

ii) Treatment System Performance Data - summary of monthly performance data for the quarter to include month, daily/cumulative daily extraction in gallons, influent concentrations, total pounds of VOCs removed, and the total amount of separate phase fuel (free product) removed in gallons. Cumulative total pounds of VOCs removed and cumulative total amount of separate phase fuel removed to date shall also be reported.

iii) Purge Water Characteristics - volume, constituents and their concentrations, and date introduced to treatment system, of purge water generated from sampling.

c) Site map - A site map for all discharge areas shall accompany quarterly reports. Show locations of sample and observation stations, and any location and/or areas where violations have occurred.

d) Discussion of Monitoring Activities - the report shall include a detailed discussion of the following monitoring activities:

i) Order Violations - any violations of requirements of this order which occurred during this reporting period, cause of violation, and actions taken or planned to achieve compliance.

ii) Sampling and Monitoring - all sampling and monitoring points and methodologies are to be detailed in the start up phase report. Thereafter, only changes in sampling and monitoring points and methodologies need be discussed.

e) Signature - All reports shall be signed by a principal executive of at least the level of vice president or his duly authorized representative. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct. The letter shall contain the following certification: " I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

3. The dischargers shall notify the Board within one day if the self-monitoring program results exceed effluent limitations, or if any activity has occurred or will occur that would result in a frequent or routine discharge of any toxic pollutant not limited by this Order. If a violation of INSTANTANEOUS MAXIMUM LIMITS should occur (and be confirmed), the discharge shall be directed to a holding tank and contained, or the extraction and treatment system shall be shut down. The content of the holding tank shall be retreated until the retreated effluent is in compliance, or be disposed in accord with the provisions of Chapter 15, Title 23, California Code of Regulations.

If the treatment system is shut down for more than 120 consecutive hours after the start up period (maintenance, repair, violations, etc.) the reason(s) for shut down, proposed corrective action(s) and estimated start up date shall be orally reported to the Board within five days of shut down and a written submission shall also be provided within 15 days of shut down.

If feasible, the corrective action(s) taken and the proposed start up procedures shall be reported to the Board at least 15 days before start up.

4. A report describing the need, method of chemical application and disposal shall be submitted to the Board at least 30 days before the use of any chemicals in the treatment, or operation and maintenance of the treatment units, is to begin. This report shall include toxicity data. The Executive Officer must approve the use of any chemicals prior to the usage of any chemicals in the treatment, operation, and/or maintenance of the treatment units.

5. The dischargers shall submit quarterly reports summarizing work accomplished toward groundwater pollution cleanup. The Executive Officer may waive this requirement if adequate reporting to the local agency(ies) or the Regional Board is already being required. The quarterly reports shall include the following information:

   (a) The results of all investigations completed to date to determine the extent of soil and/or groundwater and/or surface water pollution due to the release(s) of hazardous substance(s);

   (b) The method of cleanup implemented to date and an assessment as to whether remediation action taken to date has been adequate and its degree of effectiveness;

   (c) Groundwater levels, and chemical analysis results presented in tabulated form for all on-site and off-site monitoring wells;

   (d) Updated potentiometric surface maps for all water bearing zones, and updated maps and cross-sections depicting isoconcentration and isothickness contours;

   (e) Description and schedule of any additional site work and/or modifications anticipated for the coming quarter; and

   (f) The method and location of disposal of the released hazardous substance(s) and any polluted soils and/or groundwater and/or surface water (indicate whether a hazardous waste manifest(s) is utilized).

6. The daily status (e.g., personnel onsite, in operation/on standby, shut down, standard observation results, etc.) of the treatment system used to achieve compliance with this Order shall be included in the Self-Monitoring Report submittal. The reason(s) for the treatment system being shut down shall also be included in this submittal.

D. Modification to Part A of the Self-Monitoring Program

1. Delete Sections:

   D.1.a., D.2.a. through D.2.g., D.3., E.1.d., E.1.e., E.3., E.4., F.1., F.2., and G.4.

2. Insert Sections:

D.2.a. Samples of effluent and receiving waters shall be collected at times coincident with influent sampling unless otherwise

stipulated. The Executive Officer may approve an alternative sampling plan if it is demonstrated to the Executive Officer's satisfaction that expected operating conditions warrant a deviation from the standard sampling plan.

D.2.e. If any instantaneous maximum limit (Effluent Limitations A.2 and A.3) for a constituent is exceeded at sampling station E-3, the discharge shall be terminated until the cause of the violation is found and corrected.

E.6. Waste Treatment Facilities

a. Deposits, discolorations, and/or plugging in the treatment system (stripping tower, carbon filters, etc.) which could adversely affect the system reliability and performance.

b. Operation of the float and/or pressure shutoff valves installed to prevent system overflow or bypass.

F.2. Discharge flow rates shall be recorded and average daily flow rates reported for each month.

3. Modify Sections:

F.1. Written reports, calibration and maintenance records, sampling and analytical records, and other compliance records shall be maintained by the dischargers for a period equal to the life of this Order, but not less than three years. The most recent three years' worth of records shall be available at the discharge facility named in this Order, and the balance of the records, three years and older may be retained elsewhere. The period of retention may be extended due to unresolved litigation or by request from the Regional Board. Records three years and older maintained offsite shall be made available to the Board at their office upon request by the Executive Officer....

G.1. ...Regional Board, at (510) 286-1255...

G.4.b. The report format shall be a format that is acceptable to the Executive Officer.

G.4.d. The report format shall be a format that is acceptable to the Executive Officer.

G.4.e. The report format shall be a format that is acceptable to the Executive Officer. Address the copy to the Regional Board as follows:

Executive Officer
California Regional Water Quality Control
Board, San Francisco Bay Region
2101 Webster Street, 5th Floor
Oakland, CA 94612

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 93-037.

2. Was adopted by the Board on April 21, 1993.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the dischargers, and revisions may be ordered by the Executive Officer or Regional Board.

STEVEN R. RITCHIE
Executive Officer

Attachments