CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

MONITORING AND REPORTING PROGRAM NO. R9-2002-0342
FOR THE DISPOSAL AND/OR REUSE OF
PETROLEUM FUEL CONTAMINATED SOILS (FCS)
IN THE SAN DIEGO REGION

A. MONITORING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Monitoring must be conducted according to United States Environmental Protection Agency test procedures approved under the most current version of Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, U.S. Environmental Protection Agency.

3. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services.

4. If the discharger monitors any pollutants more frequently than required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharger's monitoring report. The increased frequency of monitoring shall also be reported.

5. The discharger shall retain 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 five years from the date of the sample, measurement, report or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the San Diego Regional Water Quality Control Board (RWQCB).

6. All monitoring instruments and devices that are used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

7. The discharger shall report all instances of noncompliance, not reported under the **Reporting Requirement D.4.** of Order No. R9-2002-0342, at the time the final report is submitted (see **Final Disposition of Wastes, Section F** of Order No. R9-2002-0342).

8. Records of monitoring information shall include:

a. The date, identity of sample monitoring point from which it was taken, weather conditions at time of sampling, and time of sampling or measurement;

b. The names and qualifications of individual(s) who performed the sampling or measurements;

b. Date and time that analyses were started and completed, and the name of the personnel performing each analysis;

c. The analytical techniques or method(s) used, including method of preserving the sample and the identity and volumes of reagents used;

d. Calculation of results;

e. Results of analyses and the practical quantitation limit (PQL) and method detection limit (MDL) for each parameter; and

g. Laboratory quality assurance results (*e.g.* percent recovery, response factor)

6. Technical reports shall be signed by an authorized person as required by the **Reporting Requirement D.9.** of Order No. R9-2002-0342.

B. WASTE MONITORING

The discharger shall ensure that all FCS wastes are discharged in compliance with the requirements of **Sections B (Discharge Prohibitions)** and **Section C (Discharge Specificiations)** of Order R9-2002-0342. The characterization of FCS wastes shall be performed as required below:

1. The discharger shall monitor the wastes from each source using the following parameters and report results to the RWQCB as required in **Eligibility, Section A** of Order R9-2002-0342.

2. Each source of petroleum hydrocarbon fuel contaminated soil *("FCS waste")* disposed of or reused at the facility shall be sampled and analyzed as follows:

a) **Sampling:** All samples of FCS wastes shall be collected in accordance with sampling guidelines set forth in the test procedures approved under the most current version of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846", U.S. Environmental Protection Agency.

b) **Analysis:** The minimum detection levels for the methods prescribed in this Order are listed in **Table 1** of this Monitoring and Reporting Program.

Table 1. Test Methods and Minimum Detection Levels for Fuel Constituents in FCS Wastes

Type of Contaminant	Constituent of Concern	Ext. Method SPLP	Carbon Range	Prep. Method	DHS/EPA Method of Analysis	Minimum Detection Level
Gasoline/Av-Gas	TPH-Gasoline		C_6-C_{12}	5035	8015M/DHS	10 mg/kg
Diesel Fuel/ kerosene/ jet fuel/ bunker fuel	TPH-Diesel Fuel		C_{10}-C_{30}	5035	8015M/DHS	10 mg/kg
Gasoline	MTBE			5035	8260B	5 µg/kg
All	BTEX			5035	8021	0.5 µg/kg
Diesel Fuel/ kerosene/ jet fuel/ bunker fuel	Leachable Diesel Fuel	Method 1312	C_{10}-C_{30}	5035	8015M/DHS	50 µg/L
All	Leachable BTEX	Method 1312		5035	8021	0.5 µg/L
Gasoline	Leachable MTBE	Method 1312		5035	8260B	5 µg/L

KEY to TABLE 1:

Gas/Av-Gas = concentration limit required for FCS containing gasoline and aviation gasoline constituents

Gasoline = concentration limit required for FCS containing only gasoline constituents

Diesel Fuel/ kerosene/ jet fuel/ bunker fuel = concentration limit required for FCS containing the listed fuel constituents

ALL = analyses required for FCS containing any fuel constituent identified in this Order.

3. All FCS wastes discharged under this Order must be sampled and analyzed using the following minimum requirements:

   a) **Sampling:** For quantities of FCS waste less than or equal to 500 cubic yards, **a minimum of four samples per 100 cubic yards** will be taken. For quantities of FCS waste above 500 cubic yards, an additional sample shall be collected for every 500 cubic yards. In all cases, **a minimum of four samples** shall be analyzed for either primary and/or secondary level

analyses as set forth in **Discharge Specifications C.3.a. and C.3.b.** of Order R9-2002-0342.

b) **Primary Level Conditions:** The waste samples shall be analyzed for the primary constituents of concern as listed in **Discharge Specification (Section C.3.a. - Table 1**) of Order R9-2002-0342.

i) Primary Level Conditions-Gas/Av-Gas.
FCS wastes containing gasoline or aviation gasoline constituents shall be analyzed using the DHS method or EPA Method 8015 modified to quantify the concentration of total petroleum hydrocarbons (TPH) through the carbon range C_6 to C_{12}. The minimum detection limit for TPH using these criteria shall be no greater than 10 mg/kg. Additionally, the FCS wastes shall be analyzed using EPA Method 8021 to quantify the concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) and EPA Method 8260B to quantify concentrations of MTBE (for gasoline only). The minimum detection limits shall be as follows: for BTEX analyses by EPA Method 8021 detection limits shall be no greater than 0.5 µg/kg and for MTBE by EPA Method 8260B detection limits shall be no greater than 0.5 µg/kg.

ii) Primary Level Conditions –Diesel fuel/kerosene/jet fuels/bunker fuel. FCS Wastes containing diesel fuel, kerosene, jet fuels, or bunker fuel constituents shall be analyzed using the DHS/EPA Method 8015 modified to quantify the concentration of total petroleum hydrocarbons through the carbon range C_{10} to C_{30}. The minimum detection limit for TPH using these criteria in FCS wastes shall be no greater than 10 mg/kg. Additionally, the FCS wastes shall be analyzed using EPA Methods 8021 to quantify the concentrations of BTEX. The minimum detection limits for BTEX analyses by EPA Method 8021 shall be no greater than 0.5 µg/kg.

c) Secondary Analysis: If the primary level conditions (**Discharge Specification C.3.a - Table 1** of Order R9-2002-0342) are not met, the samples of FCS wastes exhibiting the highest concentrations as a result of the primary analyses (**a minimum of 4 samples** for all parameters tested) shall be further analyzed for the secondary constituents of concern conditions (**Discharge Specification C.3.b. - Table 2** of Order R9-2002-0342).

i) Secondary-Gasoline/Av-Gas.
For secondary analysis, samples of FCS wastes containing gasoline or aviation gasoline constituents shall be extracted using the Synthetic Precipitation Leaching Procedure (SPLP) using a zero

headspace extractor. Procedures for the SPLP are described in EPA method 1312 of "Test Methods for Solid Waste, SW 846". The SPLP waste extract shall be analyzed for BTEX using Method 8021 and analyzed for MTBE using Method 8260B (for gasoline only). The minimum detection limit for BTEX in waste extract, using Method 8021, shall be no greater than 0.5 µg/L. The minimum detection limit for MTBE in the SPLP waste extract, using Method 8260B, shall be no greater than 5 µg/L.

ii) Secondary- Diesel fuel/kerosene/jet fuels/bunker fuel.
For secondary analysis, samples of FCS wastes containing diesel fuel, kerosene, jet fuel, or bunker fuel constituents shall be extracted using the Synthetic Precipitation Leaching Procedure (SPLP) using a zero headspace extractor. Procedures for the SPLP are described in EPA method 1312 of "Test Methods for Solid Waste, SW 846". The SPLP waste extract shall be analyzed for diesel fuel constituents using DHS/EPA Method 8015 modified to quantify the concentration of total petroleum hydrocarbons (TPH) through the carbon range C_{10} to C_{30}, and BTEX using Method 8021. The minimum detection limit for TPH analyses in the waste extract (8015M) shall be no greater than 50 µg/L. The minimum detection limit for BTEX in waste extract, using Method 8021, shall be no greater than 0.5 µg/L.

4. The RWQCB Executive Officer may consider alternative analytical methods and protocols proposed by the discharger. However, discharger must provide the RWQCB with acceptable justification to support proposed alternatives to protocols set forth in this Monitoring and Reporting Program.

5. Under authority of Water Code Section 13267(a), the discharger may be required to submit additional analyses for other waste constituents (*e.g.,* for other fuel additives or degradation products thereof) or additional monitoring reports as deemed appropriate by the RWQCB Executive Officer.

C. REPORTS TO BE FILED WITH THE RWQCB

Under authority of Water Code Section 13267(a), all reports shall be submitted no later than **60 days** following final discharge of FCS waste at the site. The report shall be comprised of the following in addition to the specific contents listed below:

1. Transmittal Letter

A letter summarizing the essential points shall be submitted with each report. The transmittal letter shall include:

a. A discussion of any requirement violations found and actions taken or planned for correcting the violations. If no violations have occurred, this shall be stated in the transmittal letter; and

b. A statement certifying that, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct as required in in **Reporting Requirements** (**Section D.9.c.**) of Order R9-2002-0342. An individual that meets the requirements contained in **Reporting Requirements** (**Section D.9.a. or D.9.b.** of Order R9-2002-0342) shall sign the required statement.

2. Waste Monitoring Report

The discharger shall submit to the RWQCB a final summary technical report. The final report shall include, but not be limited to the following:

a. A completed FCS certification form (attached to Order R9-2002-0342) for each separate source (*i.e.*, unauthorized release case) of petroleum hydrocarbon fuel contaminated soils (FCS wastes) discharged at the site.

b. The following information shall be attached to each completed FCS certification form:

i. Copy of the laboratory data sheets for analytical results from the waste

ii. Complete copy of applicable laboratory quality assurance/quality control (QA/QC) data.

iii. The discharge shall provide the information in 2.b.i and 2.b.ii (above) as an appendix to the Final Summary Report pursuant to **Section F** (**Final Disposition of Wastes**) of Order R9-2002-0342.

c. Where the reuse of FCS wastes is part of an individual site redevelopment project (involving only one parcel/property), the discharger shall provide the RWQCB with an estimated completion date for the site-specific redevelopment work.

d. Where the reuse of FCS wastes is part of a larger redevelopment project, involving multiple properties/parcels/sites, the discharger shall also provide the RWQCB with an estimated completion date for the final redevelopment project.

D. REPORTING SCHEDULE

Under authority of Water Code Section 13267(a), the discharger is required to comply with the following minimum reporting schedule:

Reporting Frequency	Report Period	Report Due
One Time	Duration of Project	Within **60 days** after discharge of FCS waste is completed.

Reports shall be submitted to the RWQCB Executive Officer:

Executive Officer
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, California 92123-4340
Attention: Supervisor Land Discharge Unit

Ordered by:

JOHN H. ROBERTUS
Executive Officer
December 11, 2002