CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

ADDENDUM No. 1 TO ORDER NO. 93-86

MAXIMUM CONCENTRATION LIMITS FOR SOILS CONTAINING NONHAZARDOUS CONCENTRATIONS OF PETROLEUM HYDROCARBONS, ORGANIC AND INORGANIC COMPOUNDS, METALS, AND PESTICIDES FOR MSW LANDFILLS WITH SUBTITLE D LINERS

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

1. On August 16, 1993, this Regional Board adopted Order No. 93-86, **Waste Discharge Requirement (WDR) Amendment for all Class III Municipal Solid Waste (MSW) Landfills in this Region, to Implement State Water Board Resolution No. 93-62, Adopted June 17, 1993, as State Policy for Water Quality Control under Section 13140 of the Water Code.** Order No. 93-86 established compliance with Federal Regulations (40 CFR parts 247 & 248, referred to as Subtitle D).

2. Landfills with liners and leachate collection systems approved in accordance with California Code of Regulations, Title 27, Division 2 (hereinafter 27 CCR) provides enhanced waste containment and an additional level of protection against leakage as compared to unlined landfills.

3. As amended, Order No. 93-86 would establish concentration limits for the discharge of soils containing nonhazardous concentrations of petroleum hydrocarbons, organic and inorganic compounds, metals and pesticides to lined cells of operating landfills.

4. Section 25157.8(a) of the California Health and Safety Code prohibits the disposal of waste containing total lead in excess of 350 parts per million (ppm), copper in excess of 2500 ppm, and Nickel in excess of 2000 ppm to other than a Class I hazardous waste site, unless (1) the appropriate Regional Water Quality Control Board amends waste discharge requirements to specifically allow the disposal of the waste and (2) the appropriate local enforcement agency has revised the solid waste facility permit of the facility to specifically allow the disposal of the waste.

5. Soils containing non-hazardous concentrations of petroleum hydrocarbons, organic and inorganic compounds, metals and pesticides discharged to lined waste management units shall be considered to not pose a significant threat to water quality if concentration levels are below the threshold concentrations listed in the Discharge Specifications of this Order.

6. Soil wastes shall be considered to pose a threat to water quality if it has contamination levels above the threshold concentrations listed in the specifications of this Order and may not be discharged at these sites.

7. The discharge of hazardous waste, as defined in California Code of Regulations (CCR) Title 22 Division 3, Chapter 30, Article 11 is prohibited.

8. MSW landfills subject to this order are existing facilities and as such are exempt from the provisions of the California Environmental Quality Act in accordance with Title 14, California Code of Regulations, Chapter 3, Article 19, Section 15301.

9. The Regional Board in a public meeting heard and considered all comments pertaining to the modification of Order No. 93-86.

10. The Regional Board has notified all known interested parties of its intent to modify Order No. 93-86.

IT IS HEREBY ORDERED, That Order No. 93-86 be modified as follows:

Add the following:

A. DISCHARGE SPECIFICATIONS

1. Soil samples shall be taken in accordance with sampling guidelines set forth in the most recently promulgated edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846", U.S. Environmental Protection Agency. At a minimum, for quantities of soil less than or equal to 500 cubic yards, four samples per 100 cubic yards will be taken. For quantities of soil between 500 to 5000 cubic yards, an additional sample shall be taken for every 500 cubic yards.

2. MSW Class III landfills shall have an approved load check program in compliance with 27 CCR Section 20870.

3. Waste soils shall be discharged into lined areas specifically approved by the Regional Board in accordance with 27 CCR. Soils may also be utilized for daily landfill cover within lined units if approved for such use by the appropriate agencies

4. All wastes received at the landfill are to be certified California non-hazardous according to 22 CCR.

5. Lined Class III Waste Management Units, as designed, may accept only soils contaminated with petroleum hydrocarbons, organic and inorganic compounds, metals, and pesticides below the following concentration limits which could pose a threat to water quality if discharged in an uncontrolled manner:

    a. Soils containing nonhazardous concentrations of metals and pesticides, organic and inorganic compounds shall not exceed hazardous waste classifications as determined using the waste extraction test (WET) (Reference CCR Title 22, Section 66261.24 as amended).

    b. Soils containing nonhazardous concentrations of metals, pesticides, organic and inorganic compounds shall not exceed maximum concentrations of contaminants using Toxicity Characteristic Leaching Procedure (TCLP) analysis (Reference: CCR Title 22, Section 66261.24 as Amended).

c. The discharge of total lead at concentrations shall not exceed the threshold for hazardous concentration established in 22 CCR. The current level is 1000 mg/kg (ppm). This Order would not effect the concentration levels established in Section 25157.8(a) for Nickel and Copper as these are equivalent to the threshold for hazardous waste for concentration levels in 22 CCR.

d. Soils containing nonhazardous concentrations of petroleum hydrocarbons. The following maximum concentration levels will be used to determine if soils containing petroleum hydrocarbons are acceptable for disposal.

Petroleum Hydrocarbon Contaminant	Maximum Concentration Limits	
Gasoline and lighter end hydrocarbons (C_4 -C_{12})	1,000 ppm TPH	1,000 -5,000 ppm TPH w/RCI and 96 hour bioassay
Diesel fuel, Kerosene Oil, Jet Fuel, (C_8-C_{22}) heavy end hydrocarbons	3,000 ppm TPH	3,000 -15000 ppm TPH w/RCI and 96 hour bioassay
Hydraulic Oil, Cutting and Grinding Oil, Virgin Motor Oil, Waste Oil (C_8-C_{40} heavy end hydrocarbons)	3000 ppm TRPH	3,000 -15000 ppm TPH w/RCI and 96 hour bioassay

TPH - Total Petroleum Hydrocarbon
TRPH - Total Recoverable Petroleum Hydrocarbon
RCI - Hazardous Waste Criteria for Reactivity, Corrosivity, Ignitiability and 96 Hour Acute Bioassay as established by CCR 22

6. Test Methods for Soils Containing Petroleum Hydrocarbons:

The following test methods shall be performed for soils containing Petroleum Hydrocarbons.

Petroleum constituent	TPH (8015M) Gas	TPH (8015 M Diesel	(EPA 418.1)	BTEX (8020)	Lead (TCLP)	Metals (Cd, Cr, Pb, Ni, Zn), OX, and PCBs	Semi-Volatile Organics (8270 or EPA 625)	Volatile organics (8260)	Metals (CAM 17), and PCBs
Leaded Gasoline									
Unleaded gasoline					*				
Kerosene Oil									
Jet Fuel									
Diesel Fuel									
Hydraulic Oil									
Cutting and Grinding Oil									
Virgin Motor Oil									
Waste Oil									

* with documentation that only unleaded gas was historically on site

7. Test Methods for Soils Containing Metals and Pesticides

The analyses can include the following methodologies:

TPH (418.1 or 8015M)	TCLP Analysis (8 RCRA metals)
8260	CAM 17
8270 (Semi-VOCs)	8080 (Chlorinated pesticides & PCBs)
8150 (herbicides)	

8. Recordkeeping

Copies of the waste approvals will be kept on file at the facility and at a minimum will include:

a. Certification from the generator certifying that the analyses submitted is representative of the material to be disposed.

b. Analytical data or Material and Safety Data Sheets representing the waste stream.

c. The Chain-of-Custody form showing the sample's integrity was not compromised.

d. The approximate yardage of the material and the transporter information.

I, John H. Robertus, 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, San Diego Region, on June 7, 1999.

- signed by -

JOHN H. ROBERTUS
Executive Officer

Table 1- Maximum Concentration Limits For Soils Containing Nonhazardous Concentrations Of Metals and Pesticides and organic and inorganic compounds. (Reference: CCR Title 22, Section 66261.24 as Amended).

Contaminant (CAM 17*)	Maximum Concentration Limits **STLC* * mg/l**
Antimony	15
Arsenic	5.0
Barium	100
Beryllium	0.75
Cadmium	1.0
Chromium	5
Cobalt	80
Copper	25
Lead	5.0
Mercury	0.2
Molybdenum	350
Nickel	20
Selenium	1.0
Silver	5
Thallium	7.0
Vanadium	24
Zinc	250
Contaminant	**STLC (mg/l)**
Aldrin	0.14
Chlordane	0.25
DDT, DDE, DDD	0.1
2,4-Dichlorophenoxyacetic acid	10
Dieldrin	0.8
Dioxin (2,3,7,8-TCDD)	0.001
Endrin	0.02
Heptachlor	0.47
Kepone	2.1
Lead compounds, organic	-
Lindane	0.4
Methoxychlor	10
Mirex	2.1
Pentachlorophenol	1.7
Polychlorinated biphenyls (PCBs)	5.0
Toxaphene	0.5
Trichloroethylene	204
2,4,5-Trichlorophenoxypropionic acid	1.0

* *California Metals 22 CCR 66261.24*

***STLC - Soluble Threshold Limit Concentration*

Table 2- Maximum Concentration Limits For Soils Containing Nonhazardous Concentrations Of Metals, Pesticides and Organic and Inorganic Compounds using Toxicity Characteristic Leaching Procedure (TCLP) analysis.(Reference: CCR Title 22, Section 66261.24 as Amended).

Contaminant	Maximum Concentration Limits Regulatory Level (Mg/l)
Arsenic	5.0
Barium	100.0
Benzene	0.5
Cadmium	1.0
Carbon tetrachloride	0.5
Chlordane	0.03
Chlorobenzene	100.0
Chloroform	6.0
Chromium	5.0
0-Cresol	200.0
m-Cresol	200.0
p-Cresol	200.0
Cresol, total	200.0
2,4- D	10.0
1,4-Dichlorobenzene	7.5
1,2-Dichloroethane	0.5
1,1-Dichloroethylene	0.7
2,4-Dinitrotoluene	0.13
Endrin	0.02
Heptachlor (and its epoxide)	0.008
Hexachlorobenzene	0.13
Hexachlorobutadiene	0.5
Hexachloroethane	3.0
Lead	5.0
Lindane	0.4
Mercury	0.2
Methoxychlor	10.0
Methyl ethyl ketone	200.0
Nitrobenzene	2.0
Pentachlorophenol	100.0
Pyridine	5.0
Selenium	1.0
Silver	5.0
Tetrachloroethylene	0.7
Toxaphene	0.5
Trichloroethylene	0.5
2,4,5-Trichlorophenol	400.0
2,4,6-Trichlorophenol	2.0
2,4,5-TP (Silvex)	1.0
Vinyl Chloride	0.2