WASTE ACCEPTANCE PLAN

BARSTOW SANITARY LANDFILL
COUNTY OF SAN BERNARDINO

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SAN BERNARDINO COUNTY PUBLIC WORKS

SUBMITTED BY:

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1.0 INTRODUCTION

Landfills owned and managed by the County of San Bernardino Solid Waste Management Division (SWMD) are designed, constructed, and operated primarily for the handling and disposal of solid wastes in accordance with Title 27 of the California Code of Regulations (CCR27), Sections 20220 and 20230, which define Class III wastes. Pursuant to the site Joint Technical Document, acceptable wastes, herein described as "routine solid wastes", include: domestic garbage and rubbish that originate in residential dwellings (residential waste); solid waste generated by stores, offices, and other commercial sources, excluding residences and industrial waste (commercial waste); residues from farming and livestock land uses (agricultural waste); types of solid waste that result from industrial processes and manufacturing operations, including tires, but excluding hazardous materials (industrial waste). Mixed municipal wastes include a combination of residential and commercial waste. Acceptable wastes for disposal or beneficial reuse at the Barstow Sanitary Landfill (BSL) are outlined in the site-specific Waste Discharge Requirements [WDR; issued by the California Regional Water Quality Control Board – Lahontan Region (LRWQCB) in Order No. R6V-2012-0037] and the Solid Waste Facility Permit (SWFP) in conformance with CCR27).

Some waste streams, such as non-hazardous contaminated soils, may be accepted either for disposal or beneficial reuse under specific conditions, following formal waste analysis and/or clearance. As the LRWQCB has not published regulations for the acceptance of contaminated soils, SWMD is providing the following guidelines and procedures for acceptance and handling of various waste types, including routine solid waste, waste-derived material, and contaminated soil. These guidelines and procedures are, in general, in conformance with WDR Order No R8-2016-0052 (issued by the Santa Ana Regional Office of the RWQCB).

In addition, the BSL may recycle certain incoming waste streams that SWMD has deemed financially feasible, beneficial, or otherwise required under current regulations. These "recycled" waste products may be used as alternative daily cover, deck and/or bench road stabilization, erosion control material, drainage infrastructure or other beneficial re-use activity. All materials accepted for beneficial reuse at the BSL shall meet the acceptance criteria specified in the site operation permits (SWFP and WDRs) and applicable federal, state, and local regulations for unlined and lined landfill sites.

2.0 ROUTINE SOLID WASTE

Routine solid waste is accepted at the site and requires no special handling. Acceptance and handling of routine solid waste shall include unloading, pushing, spreading, and compaction. This waste must be covered at the end of each operation day.

3.0 WASTE-DERIVED MATERIAL

Certain materials from the solid waste stream may be diverted, processed and reused if use of the material is beneficial for the site. The benefits include, but are not limited to, conservation

of valuable landfill airspace, use is financially feasible and beneficial for site maintenance and operation activities, or is otherwise required under current landfill regulations. Therefore, SWMD enhances its material diversion efforts by targeting waste materials that are already approved by various regulatory agencies such as CalRecycle and the Water Quality Control Board for on-site beneficial uses.

Pursuant to CCR27, Section 20686, "beneficial re-use" of solid wastes at MSW landfills shall include, but not be limited to, the following applications:

- Alternative daily cover (ADC)
- Alternative intermediate cover
- Final cover foundation layer
- Liner operations layer
- Leachate and landfill gas collection system
- Construction fill
- Road base
- Operation pads and access roads for wet-weather operations
- Soil amendments for erosion control and landscaping.

Furthermore, Section 20690 of the CCR27 approves the use of the following waste and waste-derived materials for use as ADC on -site:

- Geosynthetic fabric
- Processed green/woody waste material
- Construction and Demolition (C&D) material
- Sludge-derived material
- Ash
- Contaminated soils/sediment
- Compost material
- Shredded tires.

All materials accepted for beneficial reuse at the BSL must first meet the acceptance criteria specified in the site-specific operation permits (SWFP and WDRs) and applicable federal, state, and local regulations for unlined and lined landfill sites.

C&D Processing Operation

C&D debris is waste material produced during the construction, renovation, or demolition of structures (i.e., buildings, roads, and bridges). Components of C&D debris typically include asphalt, bricks, concrete and other masonry materials, soils rock, wall coverings, drywall, insulation, roofing, shingles, metal, wood waste, carpet, and floor tiles. If C&D diversion and processing is undertaken at the landfill, the landfill customers would be allowed to haul their C&D waste directly to a designated C&D area for temporary storage and future processing (grinding) and re-use.

Green/Woody Waste Processing

Green waste is vegetative waste including leaves, tree branches, untreated and unpainted lumber, grass and plant clippings. If green waste diversion is undertaken at the landfill, customers would be directed to an area to deposit their green waste either on the ground or in storage bins. After sorting, the green/woody waste may be processed and/or transferred offsite to supply other higher end beneficial uses (such as composting and biomass-to-energy). If ground into mulch, processed green materials may be utilized as ADC or erosion control, as needed, within the landfill site.

4.0 CONTAMINATED SOIL ACCEPTANCE CRITERIA

Non-Hazardous contaminated soil is accepted for disposal or beneficial reuse at the BSL in accordance with applicable federal, state and local regulations. To maintain consistency throughout SWMD's waste system, SARWQCB WDR Order R8-2016-0052 was used as guidance to develop this Waste Acceptance Plan (WAP). The information in this WAP is intended to establish guidelines and procedures to determine if contaminated soil is acceptable for on-site use, as waste to be buried, or as material that is unacceptable for disposal in a Class III landfill. SARWQCB WDR Order R8-2016-0052 provides guidance regarding limits for the disposal or reuse of soils contaminated with total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semi-VOCs (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), and California Administrative Manual (CAM) metals. Threshold values for these constituents differ depending on the disposition and/or intended use of the contaminated soils as follows:

- Unrestricted onsite reuse, including, but not limited to: alternative daily cover, alternative intermediate cover, final cover foundation layer, liner operations layer, leachate and landfill gas collection system, construction fill, road base, wet weather operation pads and access roads, and soil amendments for erosion control and landscaping.
- Disposal within unlined landfills.
- Disposal within lined landfills.

4.1 Unrestricted Onsite Use

Clean and slightly contaminated soils, for which waste concentrations do not exceed the following threshold criteria, may be disposed of or used onsite at any portion of the landfill without restriction.

- For petroleum hydrocarbon contaminated soils, the threshold concentration is an average TPH concentration of 50 milligrams per kilogram (mg/kg) in the gasoline range (C_4-C_{12}), or an average concentration of 100 mg/kg in the diesel range (C_{13}-C_{22}), or an average concentration of 1000 mg/kg in the heavy oil range (C_{23+}). The TPH for full chain hydrocarbons (gasoline, diesel, and heavy oils) cannot exceed 1000 mg/kg.

- With respect to constituents other than TPH, the following threshold concentration limits apply:
    - Soils with an average, contaminant-specific concentration that does not exceed a Regional Screening Level (RSL) for residential sites established by the U.S. Environmental Protection Agency (USEPA).
    - In absence of RSL limits, soils with an average, contaminant-specific concentration that does not exceed an Environmental Screening Level (ESL) for "Soil Tier 1" established by the San Francisco Bay RWQCB.
    - Soils for which a RSL or ESL has not been established, an average contaminant-specific concentration shall not exceed, on a per weight basis, 10 times the maximum contaminant level (MCL) for drinking water, established by the USEPA and/or the State Water Board's Division of Drinking Water, whichever is more stringent. Of note, although MCLs are provided in units of milligrams per liter (mg/L) and soil analysis is provided in units of milligrams per kilogram (mg/kg), each should be directly compared (e.g. 5 mg/L = 5 mg/kg).
    - Constituents that are naturally occurring in soils (such as metals) may exceed the previously described threshold concentration levels. Average concentrations shall be considered for these naturally occurring constituents in the region. A demonstration must be made that they are naturally occurring and that these levels will not result in impacts to surface or groundwater quality.
    - Soils with an average pH that does not exceed 9 nor fall below 6.
    - Soils with an average specific conductance value that does not exceed 2,000 micromhos per centimeter (mmhos/cm).

4.2 Disposal within an Unlined Cell

Clean and slightly contaminated soils, for which waste concentrations do not exceed the following threshold criteria, may be disposed of in unlined landfill cells:

- For petroleum hydrocarbon contaminated soils, the threshold concentration is an average TPH concentration of 500 mg/kg in the gasoline range (C_4-C_{12}), or an average concentration of 5,000 mg/kg in the diesel range (C_{13}-C_{22}), or an average TPH concentration of 5,000 mg/kg.
- With respect to constituents other than TPH, the following threshold concentration limits apply:
    - Soils with an average, contaminant-specific concentration that does not exceed a USEPA RSL.
    - In absence of RSL limits, soils with an average, contaminant-specific concentration that does not exceed an ESL for "Leaching to Groundwater" established by the San Francisco Bay RWQCB.

- Soils contaminated with VOCs, SVOCs, organochlorine pesticides, PCBs, or CAM metals shall not be disposed of at unlined portions of the landfill if the contaminant exceeds 100 times the maximum contaminant level (MCL) for drinking water, on a per-weight basis. Of note, although MCLs are provided in units of mg/L and soil analysis is provided in units of mg/kg, each should be directly compared (e.g. 5 mg/L = 5 mg/kg).
- Soils with an average pH that does not exceed 9 nor fall below 6.
- Soils with an average specific conductance value that does not exceed 2,000 μmhos/cm.

4.3 Disposal in a Lined Cell

Non-hazardous soil contaminated with TPH, VOCs, SVOCs, organochlorine pesticides, PCBs, or CAM metals at concentrations exceeding criteria established for unlined landfills (Sections 4.1 and 4.2) can be disposed of in a lined portion of a Class III landfill in the Lahontan Region if the discharger determines, pursuant to approval by the Executive Officer, that the contaminated soils are not classified as designated waste. To satisfy this requirement, the SWMD has developed waste acceptance criteria consistent with *The Designated Level Methodology for Waste Classification and Cleanup Level Determination*. In developing the waste acceptance criteria, the following were considered: municipal and domestic supply beneficial use water quality objectives in the Lahontan basin, a calculated leakage flow based on landfill-specified design criteria, a calculated groundwater flow rate based on landfill specific and hydrogeologic conditions, and equilibrium partitioning of waste constituents between leachate and soils and also between leachate and groundwater with consideration for dilution attenuation. The waste acceptance criteria are included in Tables 1 through 5 and discussed in Section 5.

In addition to the aforementioned waste acceptance criteria, soils that meet the following threshold limits may be discharged to a lined or lined portion of a landfill cell:

- For petroleum hydrocarbon contaminated soils, soils contaminated with an average TPH concentration that does not exceed 1,000 mg/kg in the gasoline range (C_4-C_{12}), or an average concentration of 10,000 mg/kg in the diesel range (C_{13}-C_{22}), or an average TPH concentration of 75,000 mg/kg.
- Soils contaminated with a PCB concentration that does not exceed 50 mg/kg [Title 40 of the Code of Federal Regulation (CFR40) §761.61(a)(5)(v)(A)(1)].
- Soils with an average pH value between 10 and 4.

5.0 WASTE ACCEPTANCE THRESHOLDS

Table 1 summarizes hazardous waste criteria. Nothing exceeding the thresholds listed in Table 1 may be accepted at the BSL. Table 2 summarizes waste acceptance thresholds with respect to TPH, as detailed in Section 4 of this WAP. Table 3 summarizes waste acceptance thresholds with respect to CAM metals. Table 4 summarizes waste acceptance thresholds with respect to

constituents with water quality objectives (WQOs), and Table 5 summarizes waste acceptance thresholds with respect to constituents that do not have WQOs.

Documents supporting the background concentrations listed in Table 3 are presented in Appendix A.

On Tables 3 and 4, designated waste thresholds were calculated to provide limits for disposal within lined cells. To calculate these thresholds, the WQO of a given constituent is multiplied by the dilution attenuation factor (DAF). The DAF is calculated using MULTIMED modeling, which uses site-specific inputs, such as liner leakage rate, depth to groundwater, hydraulic conductivity, hydraulic gradient, porosity, carbon content in soil, and biodegradation. MULTIMED modeling information is provided in Appendix B. The DAF calculated specifically for the BSL is 705. However, to remain conservative, a safety factor of 1.5 was applied to the calculated DAF, resulting in a DAF of 470. The DAF of 470 was used to calculate waste acceptance threshold limits.

6.0 CONTAMINATED SOIL CHARACTERIZATION

Waste characterization shall be performed on contaminated soils and submitted to SWMD's Operations Section for review and approval prior to shipment to the site.

6.1 Sampling Frequency

An appropriate number of samples shall be collected to characterize contaminated soils based on the volume of soil expected to be delivered to the landfill. The following table defines these sampling frequencies:

CUBIC YARDS (CY) OF SOIL	NUMBER OF SAMPLES
Less than 20	1*
20 to 100	2
101 to 500	4
501 to 2,500	6
2,500 to 20,000	1 additional sample for every 500 CY over 2,500 CY
Greater than 20,000	1 additional sample for every 2,000 CY over 20,000 CY

Note: * - Less than 20 CY will only require sampling for TPH, CAM metals, and any suspected contaminants.

6.2 Analytical Program

For waste quantities totaling less than 20 CYs, the following constituents shall be analyzed in all soil samples:

- TPH (C_4-C_{12} Range)
- TPH (C_{13}-C_{22} Range)

- TPH (C_{23}-C_{40} Range)
- CAM metals

At the discretion of the SWMD, and depending on the source of the contaminated soil under consideration, additional analytes may be required.

For quantities greater than 20 CY, soil samples shall be collected and analyzed for the following:

- TPH (C_4-C_{12} Range)
- TPH (C_{13}-C_{22} Range)
- TPH (C_{23}-C_{40} Range)
- CAM metals
- VOCs
- SVOCs

At the discretion of the SWMD, and depending on the source of the material under consideration, additional analytes may be required. These analyses may include, but are not limited to:

- PCBs
- Organochlorine Pesticides
- Organophosphorus Compounds
- Chlorinated Herbicides

Based on the results obtained and the source of the contaminated soil, and at the discretion of SWMD, the analyses program may be reduced (e.g. no detections for a suite of constituents).

All testing is to be completed by a State accredited environmental laboratory using the most appropriate method listed in the most recent update of the USEPA's publication SW-846 ("Test Methods for Evaluating Solid Waste, Physical/Chemical Methods"). The analytical laboratory shall include the method of analysis used on all lab reports. All samples shall be collected in laboratory-approved or laboratory-supplied containers.

7.0 WASTE ACCEPTANCE PLAN IMPLEMENTATION

The following steps will be taken to profile and accept contaminated soil:

- The waste generator shall contact SWMD's Operations Section for waste profiling instructions and a generator/waste form (special waste form), which includes information relative to the generator, the transporter, the property owner, the site of waste origin, soil information, and sample information. A copy of the special waste form is included in Appendix C.

- The special waste form shall be fully completed and signed and dated with a statement indicating that all items listed on the special waste form are true and to the best of the generator's knowledge, the soil is non-hazardous.
- The special waste form and analytical testing results will be submitted to SWMD's Operations Section for review. SWMD staff will verify that appropriate analyses and sampling frequencies were performed, will request additional information or provide guidance on additional testing if necessary, and determine the fate of contaminated soils (reject, dispose in lined cell, dispose in unlined cell, or reuse onsite) by comparing analytical results to threshold values.
- SWMD staff will either deny acceptance of the soil or provide the generator with a soil acceptance letter for each truck load of soil (noting whether the soil must be disposed within a lined cell or if the soil is acceptable for beneficial reuse/unlined cell disposal). Soil acceptance letters will expire after 90 days of issue, though extensions may be granted at the SWMD's discretion.
- A soil acceptance letter with an attached special waste form must accompany each load to the landfill and must be presented to the scale house attendant for verification. The scale house attendant will perform an initial visual load screening to verify that the load matches the descriptions on the special waste form and soil acceptance letter, and a random load screening or suspicious load screening (as necessary) using a photoionization detector (PID) to verify that the soil characteristics reported on the special waste form appear accurate. Any loads that cannot be verified as approved for disposal at the BSL will be detained until approval is confirmed, or turned away.

8.0 REPORTING

SWMD's Operations Section will keep records of all information that is to be reported to the RWQCB, including:

- The types, volumes, and fate (disposal or onsite reuse) of all accepted contaminated soils and waste-diverted material.
- Waste profiling information by the discharger (Appendix C – Special Waste Form).
- The time, date, location, and description of all samples.
- Name of individual who completed the sampling.
- The time and date of analyses and analytical technique/method used.
- All analytical results used for waste profiling.

This information will be provided in an Appendix under the Annual Summary Report for the water quality Monitoring & Reporting Program (M&RP) in accordance with the site-specific WDRs. All reports pertaining to waste acceptance will be signed and certified by the principal executive officer or elected official; or by a duly authorized representative of that person. Additionally, the following certification will be made:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

9.0 REFERENCES

California Regional Water Quality Control Board, Los Angeles Region, 2011 "Amendments to Waste Discharge Requirements for Disposal and Onsite Use of Non-Designated/Non-Hazardous Contaminated Soils and Related Wastes At Municipal Solid Waste Landfills", March.

California Regional Water Quality Control Board, Lahontan Region, 2012, "Revised Waste Discharge Requirements for Barstow Class III Landfill, Class II Surface Impoundments and Septage Sludge Landfarm", Order No. R6V-2012-0037", adopted on July 11, 2012.

California Regional Water Quality Control Board, Santa Ana Region, 2016, "Amendment to the Waste Discharge Requirements for Active Class III Landfills within the Santa Ana Region for Acceptance of Non-Hazardous Contaminated Soils and Certain Waste/Waste-Derived Material for Disposal or Beneficial Reuse, Order No. R8-2016-0052", October.

County of San Bernardino, 2015, "Joint Technical Document, Barstow Sanitary Landfill, San Bernardino County, California", December.

U.S. Environmental Protection Agency, 2019, "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," http://www3.epa.gov/epawaste/hazard/testmethods/sw846/online/.

TABLE 1 SUMMARY OF HAZARDOUS WASTE CRITERIA BARSTOW SANITARY LANDFILL			
ANALYTE	**TTLC (mg/kg)**	**STLC (mg/L)**	**TCLP (mg/L)**
Aldrin	1.4	0.14	NS
Antimony and/or Antimony Compounds	500	15	NS
Arsenic and/or Arsenic Compounds	500	5.0	5.0
Asbestos	1.0 (%)	NS	NS
Barium and/or Barium Compounds (Excluding Barite	10,000	100	100
Benzene	NS	NS	0.50
Beryllium and/or Beryllium Compounds	75	0.75	NS
Cadmium and/or Cadmium Compounds	100	1.0	1.0
Carbon Tetrachloride	NS	NS	0.50
Chlordane	2.5	0.25	0.030
Chlorobenzene	NS	NS	100
Chloroform	NS	NS	6.0
Chromium and/or Chromium III Compounds (See Note	2,500	5.0	5.0
Chromium (VI) Compounds	500	5.0	NS
Cobalt and/or Cobalt Compounds	8,000	80	NS
Copper and/or Copper Compounds	2,500	25	NS
Cresol (Total)	NS	NS	200
Cresol, m-	NS	NS	200
Cresol, o-	NS	NS	200
Cresol, p-	NS	NS	200
DDT, DDE, DDD	1.0	0.10	NS
Dichloroethane, 1,2-	NS	NS	0.50
Dichlorobenzene, 1,4-	NS	NS	7.5
Dichloroethylene, 1,1-	NS	NS	0.70
Dichlorophenoxy Acetic Acid, 2,4- (2,4-D)	100	10	10
Dieldrin	8.0	0.80	NS
Dinitrotoluene, 2,4-	NS	NS	0.13
Endrin	0.20	0.020	0.020
Fluoride Salts	18,000	180	NS
Heptachlor and Heptachlor Epoxide	4.7	0.47	0.008
Hexachlorobenzene	NS	NS	0.13
Hexachlorobutadiene	NS	NS	0.50
Hexachloroethane	NS	NS	3.0
Kepone	21	2.1	NS
Lead and/or Lead Compounds (See Note 5)	1,000	5.0	5.0
Lead Compounds (Organic)	13	NS	NS
Lindane	4.0	0.40	0.40
Mercury and/or Mercury Compounds	20	0.20	0.20
Methoxychlor	100	10	10
Methyl Ethyl Ketone (2-Butanone)	NS	NS	200
Mirex	21	2.1	NS

TABLE 1
SUMMARY OF HAZARDOUS WASTE CRITERIA
BARSTOW SANITARY LANDFILL

ANALYTE	TTLC (mg/kg)	STLC (mg/L)	TCLP (mg/L)
Molybdenum and/or Molybdenum Compounds (Exluding Molybdenum Disulfide)	3,500	350	NS
Nickel and/or Nickel Compounds	2,000	20	NS
Nitrobenzene	NS	NS	2.0
Pentachlorophenol	17	1.7	100
Polychlorinated Biphenyls (PCBs)	50	5.0	NS
Pyridine	NS	NS	5.0
Selenium and/or Selenium Compounds	100	1.0	1.0
Silver	500	5.0	5.0
Dioxin (2,3,7,8-TCDD)	0.010	0.001	NS
Tetrachloroethylene	NS	NS	0.70
Thallium and/or Thallium Compounds	700	7.0	NS
Toxaphene	5.0	0.50	0.50
Silvex (2,4,5-TP)	NS	NS	1.0
Trichloroethylene	2,040	204	0.50
Trichlorophenol, 2,4,5-	NS	NS	400
Trichlorophenol, 2,4,6-	NS	NS	2.0
Trichlorophenoxypropionic acid, -2,4,5	10	1.0	NS
Vanadium and/or Vanadium Compounds	2,400	24	NS
Vinyl Chloride	NS	NS	0.20
Zinc and/or Zinc Compounds	5,000	250	NS

NOTES:

1. TTLC - Total Threshold Limit Concentration. Wastes with constituent concentrations exceeding these values are hazardous.

2. STLC - Soluble Threshold Limit Concentration. Wastes with extract concentrations determined using the Waste Extraction Test (WET) that exceed these values are hazardous.

3. TCLP - Toxicity Characteristic Leachate Procedure. Wastes with extract concentrations determined using the TCLP that exceed these values are hazardous.

4. In accordance with CCR Title 22, Chapter 11, §66261.24, Table II, footnote (d), if the soluble chromium, as determined by the TCLP is less than 5 mg/l, and the soluble chromium, as determined by the procedures set forth in Appendix II of chapter 11, equals or exceeds 560 mg/l and the waste is not otherwise identified as a RCRA hazardous waste pursuant to section 66261.100, then the waste is a non-RCRA hazardous waste.

NS - Not Specified.

TABLE 2
SUMMARY OF TPH WASTE ACCEPTANCE THRESHOLD CONCENTRATIONS
BARSTOW SANITARY LANDFILL

HYROCARBON RANGE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL (mg/kg)	LINED CELL DISPOSAL (mg/kg)
C4-C12 (Gasoline Range)	50	500	1,000
C12-C22 (Diesel Range)	100	5,000	10,000
≥C23 (Heavy Hydrocarbons)	1,000	NS	NS
Full Chain of Hydrocarbons	1,000	50,000	75,000

Notes:
TPH - Total Petroleum Hydrocarbons
NS - Not Specified

TABLE 3
CAM METALS ACCEPTANCE THRESHOLD CONCENTRATIONS
BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED ONSITE USE (mg/kg)	UNLINED CELL DISPOSAL (mg/kg)	LINED CELL DISPOSAL (mg/kg)	REFERENCE CONCENTRATIONS								
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)	BACKGROUND (mg/kg)	10 x MCL (mg/kg)	100 x MCL (mg/kg)	WQO x DAF (mg/kg)
Antimony	31	470	500	500	31	31	470	NS	-	0.06	0.6	2.8
Arsenic	0.68	3.0	500	500	0.68	0.670	3.0	NS	12*	0.1	1	4.7
Barium	10,000	10,000	10,000	10,000	15,000	3,000	220,000	NS	120**	10	100	470
Beryllium	75	75	75	75	160	42	2,300	NS	-	0.04	0.4	1.9
Cadmium	0.05	0.5	2.4	100	NS	39	NS	NS	-	0.05	0.5	2.4
Chromium	56	56	56	2,500	NS	NS	NS	NS	56**	0.5	5	24
Cobalt	23	350	8,000	8,000	23	23	350	NS	14**	NA	NA	NA
Copper	2,500	2,500	2,500	2,500	3,100	3,100	47,000	NS	31**	13	130	611
Lead	400	800	1,000	1,000	400	80	800	NS	5.4**	0.15	1.5	7.1
Mercury	11	20	20	20	11	13	47	NS	-	0.02	0.2	0.94
Molybdenum	390	3,500	3,500	3,500	390	390	5,800	NS	-	NA	NA	NA
Nickel	1,500	2,000	2,000	2,000	1,500	86	22,000	NS	57**	1.0	10	47
Selenium	100	100	100	100	390	390	5,800	NS	-	0.5	5	24
Silver	390	500	500	500	390	390	5,800	NS	-	1.0	10	47
Thallium	0.78	12	700	700	0.78	0.8	12	NS	-	0.02	0.2	0.94
Vanadium	390	2,400	2,400	2,400	390	390	5,800	NS	46**	NA	NA	NA
Zinc	5,000	5,000	5,000	5,000	23,000	23,000	350,000	NS	61**	50	500	2,350

NOTES:

1. UNRESTRICTED ONSITE USE THRESHOLDS

Threshold concentrations determined utilizing the values in order of priority: 1) RSL for residential sites (USEPA); 2) in absence of RSL, an ESL for "Soil Tier 1" (SFBRWQCB); 3) in absence of an RSL and ESL, 10xMCL for drinking water on a per-weight basis (SWBDDW). Background levels may be utilized in lieu of the 10xMCL values where applicable. Material shall not exceed the TTLC (CCR Title 22) threshold regardless of RSL, ESL, MCL or Background threshold values.

2. UNLINED CELL DISPSOSAL THRESHOLDS:

Threshold concentrations determined utilizing the values in order of priority: 1) RSL for industrial sites (USEPA); 2) in absence of RSL, an ESL for "Leaching to Groundwater" (SFBRWQCB); 3) in absence of an RSL and ESL, 100xMCL for drinking water on a per-weight basis (SWBDDW). Background levels may be utilized in lieu of the 100xMCL values where applicable. Material shall not exceed the TTLC (CCR Title 22) threshold regardless of RSL, ESL, MCL or Background threshold values.

3. LINED CELL DISPSOSAL THRESHOLDS:

Threshold concentrations are determined by selecting the highest value of 1) Industrial RSL (USEPA), 2) ESL for "Soil Tier 1" (SFBRWQCB); 3) established Background concentrations, and 4) WQOxDAF. Material shall not exceed the TTLC (CCR Title 22) threshold regardless of RSL, ESL, Background or WQOxDAF threshold values.

4. BACKGROUND CONCENTRATION NOTES

* "Determination of a Southern California Regional Background Arsenic Concentration is Soil" (G. Chernoff, W. Bosan, and D. Oudiz, California Department of Toxic Substances Control) suggests 12 mg/kg arsenic as an appropriate screening level.

** "Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley Nation Laboratory" (D. Diamond, D. Baskin, D. Brown, L. Lund, J. Najita, and J. Javandel). Median values shown.

5. REFERENCES:

a. TTLC - California Code of Regulations, Title 22, Chapter 11, Article 2.
b. EPA RSLs - U.S. EPA Regional Screening Levels (Formerly PRGs), November 2019, Summary Table (TR=1E-06 and THQ=1.0), https://www.https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables
c. ESLs -San Francisco Bay Regional Water Quality Control Board http://docs.ppsmixeduse.com/ppp/DEIR_References/2016_0222_sfrwqcb_environmentalscreeninglevels.pdf
d. MCLs - California Code of Reguations, Title 22.

6. ABBREVIATIONS:

TTLC - Total Threshold Limit Concentration
RSL - Regional Screening Level (USEPA)
ESL - Environmental Screening Level (San Francisco Bay RWQCB)
NS - Not Specified
NA - Not Applicable
WQO - Water Quality Objective
DAF - Dilution Attenuation Factor
MCL - Maximum Contaminant Level
NIC - Not Included

TABLE 4
SUMMARY OF THRESHOLD CONCENTRATIONS FOR VOCs, SVOCs, PCBs, ORGANOCHLORINE PESTICIDES, AND OTHER CONSTITUENTS WITH WATER QUALITY OBJECTIVES
BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED SITE USE (mg/kg)	UNLINED CELL DISPOSAL (mg/kg)	LINED CELL DISPOSAL (mg/kg)	REFERENCE CONCENTRATIONS						
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)	10 x MCL (mg/kg)	WQO x DAF (mg/kg)
Alachlor	9.7	41	41	NS						0.940
Aluminum	77,000	1,100,000	1,100,000	NS						470
Atrazine	2.4	10	10	NS						0.470
Bentazon	1,900	25,000	25,000	NS						8.460
Benzene	1.2	5.1	5.1	NS						0.470
Benzo[a]pyrene	0.110	0.29	0.29	NS						0.0940
Bis(2-ethylhexyl)phthalate	39	160	160	NS						1.880
Boron	16,000	230,000	230,000	NS						NS
Bromate	0.99	4.7	4.7	NS						4.70
Bromodichloromethane	0.29	1.3	37.6	NS						37.6
Bromoform	19	86	86	NS						37.6
Carbofuran	320	4,100	4,100	NS						8.460
Carbon Tetrachloride	0.65	2.9	2.9	NS						0.235
Chlordane	1.7	2.5	2.5	2.5						0.0470
Chlorite (Sodium Salt)	2,300	35,000	35,000	NS						470
Chloroacetic Acid	0.6	28.20	28.2	NS						28.20
Chlorobenzene	280	1,300	1,300	NS						32.90
Chloroform	0.32	1.4	37.6	NS						37.6
Cyanide (CN-)	23	150	120	NS						70.5
Dalapon	1,900	25,000	25,000	NS						94.0
Di(2-ethylhexyl)adipate	450	1,900	1,900	NS						188.0
Dibromo-3-chloropropane, 1,2-	0.0053	0.064	0.094	NS						0.0940
Dibromochloromethane	8.3	39	39	NS						37.6
Dibromoethane, 1,2-	0.036	0.16	0.16	NS						0.0235
Dichloroacetic Acid	11	46	46	NS						28.20
Dichlorobenzene, 1,2-	1,800	9,300	9,300	NS						282.0
Dichlorobenzene, 1,4-	2.6	11	11	NS						2.35
Dichloroethane, 1,1-	3.6	16	16	NS						2.350
Dichloroethane, 1,2-	0.46	2.0	2.0	NS						0.235
Dichloroethylene, 1,1-	230	1,000	1,000	NS						2.820
Dichloroethylene, 1,2-cis-	160	2,300	2,300	NS					0.06	2.820
Dichloroethylene, 1,2-trans-	1,600	23,000	23,000	NS					0.1	4.70
Dichlorophenoxy Acetic Acid, 2,4-(2,4-D)	100	100	100	100					0.7	32.9
Dichloropropane, 1,2-	2.5	11.0	4.4	NS					0.05	2.350
Dichloropropene, 1,3-	2	8	23,000	NS					0.005	0.235
Dinoseb	63	820	820	NS					0.07	3.29
Diquat	140	1,800	1,800	NS					0.2	9.40
Endothall	1,300	16,000	16,000	NS					1	47.0
Endrin	0.20	0.20	0.20	0.20					0.02	0.940
Ethylbenzene	5.8	25.0	141.0	NS					3	141.0
Fluorine (Soluble Fluoride)	4,700	70,000	18,000	NS					20	940
Glyphosate	6,300	82,000	82,000	NS					7	329.0
Heptachlor	0.13	0.63	0.63	4.7					0.0001	0.00470
Heptachlor Epoxide	0.07	0.33	0.33	4.7					0.0001	0.00470
Hexachlorobenzene	0.21	0.96	0.96	NS					0.01	0.470
Hexachlorocyclopentadiene	1.8	7.5	23.5	NS					0.5	23.5
Iron	55,000	820,000	820,000	NS					3.0	141.0
Lindane (gamma-BHC)	0.57	2.5	2.5	4.0					0.002	0.0940
Manganese	1,800	26,000	26,000	NS					0.500	23.5
Methoxychlor	100	100	100	100					0.3	14.10
Methyl tert-Butyl Ether (MTBE)	47	210	210	NS					0.13	6.11
Methylene Chloride	57	1,000	1,000	NS					0.05	2.350
Molinate	130	1,600	1,600	NS					0.2	9.40
Nitrate	130,000	1,900,000	1,900,000	NS					100	4,700
Nitrate + Nitrite (as N)	100	4,710	4,710	NS					100	4,700
Nitrite	7,800	120,000	120,000	NS					10	470
Oxamyl	1,600	21,000	21,000	NS					0.5	23.5

TABLE 4

SUMMARY OF THRESHOLD CONCENTRATIONS FOR VOCs, SVOCs, PCBs, ORGANOCHLORINE PESTICIDES, AND OTHER CONSTITUENTS WITH WATER QUALITY OBJECTIVES

BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED SITE USE (mg/kg)	UNLINED CELL DISPOSAL (mg/kg)	LINED CELL DISPOSAL (mg/kg)	REFERENCE CONCENTRATIONS						
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)	10 x MCL (mg/kg)	WQO x DAF (mg/kg)
Pentachlorophenol	1.0	4.0	4.0	17	[illegible]	[illegible]		[illegible]	0.01	0.470
Perchlorate and Perchlorate Salts	55	820	820	NS	[illegible]		[illegible]	[illegible]	0.06	2.820
Picloram	4,400	57,000	57,000	NS	4,400	[illegible]	[illegible]	[illegible]	5	235
Polychlorinated Biphenyls (PCBs)	0.018	0.077	0.235	50	0.018	[illegible]	[illegible]	[illegible]	0.005	0.235
Silvex (2,4,5-TP)	10	10	10	10	510	[illegible]	[illegible]	[illegible]	0.5	23.5
Simazine	4.5	19	19	NS	4.5	[illegible]	[illegible]	[illegible]	0.04	1.880
Sodium Cyanide	78	1,200	1,200	NS	78	[illegible]	[illegible]	[illegible]	2	94.0
Styrene	6,000	35,000	35,000	NS	6,000	[illegible]	[illegible]	[illegible]	1	47.0
TCDD, 2,3,7,8-	4.8E-06	2.2E-05	2.2E-05	0.01	4.8E-06	[illegible]	[illegible]	[illegible]	3.0E-07	1.41E-05
Tetrachloroethane, 1,1,2,2-	0.6	2.7	2.7	NS	0.6	[illegible]	[illegible]	[illegible]	0.01	0.470
Tetrachloroethylene	24	100	100	NS	24	[illegible]	[illegible]	[illegible]	0.05	2.350
Thallium (Soluble Salts)	0.78	12	12	700	0.78	NS	12	NS	0.02	0.940
Thiobencarb	630	8,200	8,200	NS	630	NS	8,200	NS	0.7	32.9
Toluene	4,900	47,000	47,000	NS	4,900	NS	47,000	NS	1.5	70.5
Toxaphene	0.49	2.1	2.1	5.0	0.49	0.46	2.1	1.8	0.03	1.410
Trichloro-1,2,2-trifluoroethane, 1,1,2-	6,700	28,000	170,000	NS	6,700	NS	28,000	NS	12	564.0
Trichloroacetic Acid	7.8	33	33	NS	7.8	NS	33	NS	0.6	28.2
Trichlorobenzene, 1,2,4-	24	110	110	NS	24	NS	110	NS	0.05	2.350
Trichloroethane, 1,1,1-	8,100	36,000	36,000	NS	8,100	NS	36,000	NS	2	94.0
Trichloroethane, 1,1,2-	1.1	5.0	5.0	NS	1.1	NS	5.0	NS	0.05	2.35
Trichloroethylene	0.94	6.0	6.0	2,040	0.94	NS	6.0	NS	0.05	2.35
Trichlorofluoromethane	23,000	350,000	350,000	NS	23,000	NS	350,000	NS	1.5	70.5
Uranium (Soluble Salts)	16	230	3,500	NS	16	NS	230	NS	0.2	9.40
Vinyl Chloride	0.059	1.7	1.7	NS	0.059	NS	1.7	NS	0.005	0.235
Xylenes	580	2,500	2,500	NS	580	NS	2,500	NS	17.5	823

NOTES:

1. UNRESTRICTED ONSITE USE THRESHOLDS

Threshold concentrations determined utilizing the values in order of priority: 1) RSL for residential sites (USEPA); 2) in absence of RSL, an ESL for "Soil Tier 1" (SFBRWQCB); 3) in absence of an RSL and ESL, 10xMCL for drinking water on a per-weight basis (SWBDDW). Material shall not exceed the TTLC (CCR Title 22) threshold regardless of RSL, ESL, or MCL threshold values.

2. UNLINED CELL DISPSOSAL THRESHOLDS:

Threshold concentrations determined utilizing the values in order of priority: 1) RSL for industrial sites (USEPA); 2) in absence of RSL, an ESL for "Leaching to Groundwater" (SFBRWQCB); 3) in absence of an RSL and ESL, 100xMCL for drinking water on a per-weight basis (SWBDDW). Material shall not exceed the TTLC (CCR Title 22) threshold regardless of RSL, ESL, or MCL threshold values.

3. LINED CELL DISPSOSAL THRESHOLDS:

Threshold concentrations are determined by selecting the highest value of 1) Industrial RSL (USEPA), 2) ESL for "Soil Tier 1" (SFBRWQCB); 3) established Background concentrations, and 4) WQOxDAF. Material shall not exceed the TTLC (CCR Title 22) threshold regardless of RSL, ESL, or WQOxDAF threshold values.

4. REFERENCES:

a. TTLC - California Code of Regulations, Title 22, Chapter 11, Article 2.
b. EPA RSLs - U.S. EPA Regional Screening Levels (Formerly PRGs), November 2019, Summary Table (TR=1E-06 and THQ=1.0), https://www.https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables
c. ESLs -San Francisco Bay Regional Water Quality Control Board http://docs.ppsmixeduse.com/ppp/DEIR_References/2016_0222_sfrwqcb_environmentalscreeninglevels.pdf
d. MCLs - California Code of Reguations, Title 22.
e. Lahontan Basin Water Quality Objectives (Basin Plan) http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/docs/ch3_wqobjectives.pdf

5. ABBREVIATIONS:

TTLC - Total Threshold Limit Concentration
RSL - Regional Screening Level (USEPA)
ESL - Environmental Screening Level (San Francisco Bay RWQCB)
NS - Not Specified
NA - Not Applicable
WQO - Water Quality Objective
DAF - Dilution Attenuation Factor
MCL - Maximum Contaminant Level
NIC - Not Included

TABLE 5
SUMMARY OF THRESHOLD CONCENTRATIONS FOR VOCs, SVOCs, PCBs, ORGANOCHLORINE PESTICIDES, AND OTHER CONSTITUENTS WITHOUT WATER QUALITY OBJECTIVES
BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
ALAR (Daminozide)	30	130	130	NS	30	NS	130	NS
Acephate	76	260	260	NS	76	NS	980	NS
Acetaldehyde	11	49	49	NS	11	NS	49	NS
Acetochlor	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Acetone	61,000	670,000	670,000	NS	61,000	0.50	670,000	0.50
Acetone Cyanohydrin	2.80E+06	1.20E+07	1.20E+07	NS	2.80E+06	NS	1.20E+07	NS
Acetonitrile	810	3,400	3,400	NS	810	NS	3,400	NS
Acetophenone	7,800	120,000	120,000	NS	7,800	NS	120,000	NS
Acetylaminofluorene, 2-	0.14	0.60	0.60	NS	0.14	NS	0.60	NS
Acrolein	0.14	0.60	0.60	NS	0.14	NS	0.60	NS
Acrylamide	0.24	4.6	4.6	NS	0.24	NS	4.6	NS
Acrylic Acid	99	420	420	NS	99	NS	420	NS
Acrylonitrile	0.25	1.1	1.1	NS	0.25	NS	1.1	NS
Adiponitrile	8.50E+06	3.60E+07	3.60E+07	NS	8.50E+06	NS	3.60E+07	NS
Alachlor	9.7	41	41	NS	9.7	NS	41	NS
Aldicarb	63	820	820	NS	63	NS	820	NS
Aldicarb Sulfone	63	820	820	NS	63	NS	820	NS
Aldrin	0.039	0.18	0.18	1.4	0.039	0.036	0.18	5.0
Ally (Metsulfuron-methyl)	16,000	210,000	210,000	NS	16,000	NS	210,000	NS
Allyl Alcohol	3.5	1.5	1.5	NS	3.5	NS	1.5	NS
Allyl Chloride	0.72	3.2	3.2	NS	0.72	NS	3.2	NS
Aluminum Phosphide	31	470	470	NS	31	NS	470	NS
Amdro (Hydramethylnon)	1100	14,000	14,000	NS	1,100	NS	14,000	NS
Ametryn	570	7,400	7,400	NS	570	NS	7,400	NS
Aminobiphenyl, 4-	0.026	0.11	0.11	NS	0.026	NS	0.11	NS
Aminophenol, m-	5,100	66,000	66,000	NS	5,100	NS	66,000	NS
Aminophenol, p-	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Amitraz	160	2,100	2,100	NS	160	NS	2,100	NS
Ammonium Sulfamate	16,000	230,000	230,000	NS	16,000	NS	230,000	NS
Amyl Alcohol, tert-	82	340	340	NS	82	NS	340	NS
Aniline	95	400	400	NS	95	NS	400	NS
Anthraquinone, 9,10-	14	57	57	NS	14	NS	57	NS
Antimony Pentoxide	39	500	500	500	39	NS	580	NS
Antimony Tetroxide	31	470	470	500	31	NS	470	NS
Antimony Trioxide	500	500	500	500	280,000	NS	1,200,000	NS
Apollo (Clofentezine)	820	11,000	11,000	NS	820	NS	11,000	NS
Aramite (Sulfurous acid)	22	92	92	NS	22	NS	92	NS
Arsine	0.27	4.1	4.1	NS	0.27	NS	4.1	NS
Assure (Quizalofop-ethyl)	570	7,400	7,400	NS	570	NS	7,400	NS
Asulam	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
Auramine	0.62	2.6	2.6	NS	0.62	NS	2.6	NS
Avermectin B1	25	330	330	NS	25	NS	330	NS
Azobenzene	5.6	26	26	NS	5.6	NS	26	NS
Azodicarbonamide	8,600	40,000	40,000	NS	8,600	NS	40,000	NS
Baygon	250	3,300	3,300	NS	250	NS	3,300	NS
Bayleton (Triadimefon)	1,900	28,000	28,000	NS	2,100	NS	28,000	NS
Baythroid (Cyfluthrin)	1,600	21,000	21,000	NS	1,600	NS	21,000	NS
Benfluralin	390	5,800	5,800	NS	390	NS	5,800	NS
Benomyl	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
Benzaldehyde	7,800	120,000	120,000	NS	7,800	NS	120,000	NS
Benzenediamine-2-methyl sulfate, 1,4-	5.4	23	23	NS	5.4	NS	23	NS
Benzenethiol	78	1,200	1,200	NS	78	NS	1,200	NS
Benzidine	0.00053	0.01	0.01	NS	0.00053	NS	0.01	NS
Benzoic Acid	250,000	3,300,000	3,300,000	NS	250,000	NS	3,300,000	NS
Benzotrichloride	0.053	0.25	0.25	NS	0.053	NS	0.25	NS
Benzyl Alcohol	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Benzyl Chloride	1.1	4.8	4.8	NS	1.1	NS	4.8	NS

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BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
Bidrin (Dicrotophos)	1.9	25	25	NS	1.9	NS	25	NS
Bifenox	570	7,400	7,400	NS	570	NS	7,400	NS
Biphenthrin	950	12,000	12,000	NS	950	NS	12,000	NS
Biphenyl, 1,1'-	47	200	200	NS	47	0.65	200	0.65
Bis(2-chloro-1-methylethyl) ether	310	47,000	47,000	NS	3100	NS	47,000	NS
Bis(2-chloroethoxy)methane	190	2,500	2,500	NS	190	NS	2,500	NS
Bis(2-chloroethyl)ether	0.23	1.0	1.0	NS	0.23	0.00008	1.0	0.00008
Bis(chloromethyl)ether	8.30E-05	3.60E-04	3.60E-04	NS	8.30E-05	NS	3.60E-04	NS
Bisphenol A	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
Boron Trichloride	160,000	2,300,000	2,300,000	NS	160,000	NS	2,300,000	NS
Boron Trifluoride	3,100	47,000	47,000	NS	3,100	NS	47,000	NS
Bromo-2-chloroethane, 1-	0.026	0.11	0.11	NS	0.026	NS	0.11	NS
Bromobenzene	290	1,800	1,800	NS	290	NS	1,800	NS
Bromochloromethane	150	630	630	NS	150	NS	630	NS
Bromomethane	6.8	30	30	NS	6.8	NS	30	NS
Bromophos	390	5,800	5,800	NS	390	NS	5,800	NS
Bromoxynil	5.3	22	22	NS	5.3	NS	22	NS
Bromoxynil Octanoate	6.7	32	32	NS	6.7	NS	32	NS
Butadiene, 1,3-	0.076	0.33	0.33	NS	0.076	NS	0.33	NS
Butanol, N-	7,800	120,000	120,000	NS	7,800	NS	120,000	NS
Butyl Benzyl Phthlate	290	1,200	1,200	NS	290	NS	1,200	NS
Butyl alcohol, sec-	130,000	1,500,000	1,500,000	NS	130,000	NS	1,500,000	NS
Butylate	3,900	58,000	58,000	NS	3,900	NS	58,000	NS
Butylated hydroxyanisole	2,700	11,000	11,000	NS	2,700	NS	11,000	NS
Butylated hydroxytoluene	150	640	640	NS	150	NS	640	NS
Butylbenzene, n-	3,900	58,000	58,000	NS	3,900	NS	58,000	NS
Butylbenzene, sec-	7,800	120,000	120,000	NS	7,800	NS	120,000	NS
Butylbenzene, tert-	7,800	120,000	120,000	NS	7,800	NS	120,000	NS
Cacodylic Acid	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Caprolactam	31,000	400,000	400,000	NS	31,000	NS	400,000	NS
Captafol	3.6	15	15	NS	3.6	NS	15	NS
Captan	240	1,000	1,000	NS	240	NS	1,000	NS
Carbaryl	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Carbon Disulfide	770	3,500	3,500	NS	770	NS	3,500	NS
Carbosulfan	630	8,200	8,200	NS	630	NS	8,200	NS
Carboxin	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Ceric oxide	1,300,000	5,400,000	5,400,000	NS	1,300,000	NS	5,400,000	NS
Chloral Hydrate	7,800	120,000	120,000	NS	7,800	NS	120,000	NS
Chloramben	950	12,000	12,000	NS	950	NS	12,000	NS
Chloranil	1.3	5.7	5.7	NS	1.3	NS	5.7	NS
Chlordecone (Kepone)	0.054	0.23	0.23	21	0.054	NS	0.23	NS
Chlorfenvinphos	44	570	570	NS	44	NS	570	NS
Chlorimuron, Ethyl-	5,700	74,000	74,000	NS	5,700	NS	74,000	NS
Chlorine	0.18	0.78	0.78	NS	0.18	NS	0.78	NS
Chlorine Dioxide	2,300	34,000	34,000	NS	2,300	NS	34,000	NS
Chloro-1,1-difluoroethane, 1-	54,000	230,000	230,000	NS	54,000	NS	230,000	NS
Chloro-1,3-butadiene, 2-	0.01	0.044	0.044	NS	0.01	NS	0.044	NS
Chloro-2-methylaniline HCl, 4-	1.2	5.0	5.0	NS	1.2	NS	5.0	NS
Chloro-2-methylaniline, 4-	5.4	23	23	NS	5.4	NS	23	NS
Chloroacetaldehyde, 2-	2.6	12	12	NS	2.6	NS	12	NS
Chloroacetophenone, 2-	43,000	180,000	180,000	NS	43,000	NS	180,000	NS
Chloroaniline, p-	2.7	11	11	NS	2.7	0.0039	11	0.0039
Chlorobenzilate	4.9	21	21	NS	4.9	NS	21	NS
Chlorobenzoic Acid, p-	1,900	25,000	25,000	NS	1,900	NS	25,000	NS
Chlorobenzotrifluoride, 4-	210	2,500	2,500	NS	210	NS	2,500	NS
Chlorobutane, 1-	3,100	47,000	47,000	NS	3,100	NS	47,000	NS
Chlorodifluoromethane	49,000	210,000	210,000	NS	49,000	NS	210,000	NS

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ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
Chloroethanol, 2-	1,600	23,000	23,000	NS	1,600	NS	23,000	NS
Chloromethane	110	460	460	NS	110	2.9	460	2.9
Chloromethyl Methyl Ether	0.02	0.089	0.089	NS	0.02	NS	0.089	NS
Chloronitrobenzene, o-	1.8	7.7	7.7	NS	1.8	NS	7.7	NS
Chloronitrobenzene, p-	63	360	360	NS	9.0	NS	38	NS
Chlorophenol, 2-	390	5,800	5,800	NS	390	0.0120	5,800	0.0120
Chloropicrin	2.0	8.2	8.2	NS	2.0	NS	8.2	NS
Chlorothalonil	180	740	740	NS	180	NS	740	NS
Chlorotoluene, o-	1,600	23,000	23,000	NS	1,600	NS	23,000	NS
Chlorotoluene, p-	1,600	23,000	23,000	NS	1,600	NS	23,000	NS
Chlorozotocin	0.0023	0.0096	0.0096	NS	0.0023	NS	0.0096	NS
Chlorpropham	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
Chlorpyrifos	63	820	820	NS	63	NS	820	NS
Chlorpyrifos Methyl	630	8,200	8,200	NS	630	NS	8,200	NS
Chlorsulfuron	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
Chlorthiophos	51	660	660	NS	51	NS	660	NS
Chromium(III), Insoluble Salts	2,500	2,500	2,500	2,500	120,000	120,000	1,800,000	NS
Chromium(VI)	0.30	6.3	6.3	500	0.30	0.3	6.3	NS
Cresol, m-	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
Cresol, o-	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
Cresol, p-	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Cresol, p-chloro-m-	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Cresols	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Crotonaldehyde, trans-	0.37	1.7	1.7	NS	0.37	NS	1.7	NS
Cumene	1,900	9,900	9,900	NS	1,900	NS	9,900	NS
Cupferron	2.5	10	10	NS	2.5	NS	10	NS
Cyanazine	0.65	2.7	2.7	NS	0.65	NS	2.7	NS
Cyanides								
Calcium Cyanide	78	1,200	1,200	NS	78	NS	1,200	NS
Copper Cyanide	390	2,500	2,500	2,500	390	NS	5,800	NS
Cyanogen	78	1,200	1,200	NS	78	NS	1,200	NS
Cyanogen Bromide	7,000	110,000	110,000	NS	7,000	NS	110,000	NS
Cyanogen Chloride	3,900	58,000	58,000	NS	3,900	NS	58,000	NS
Hydrogen Cyanide	23	150	150	NS	23	NS	150	NS
Potassium Cyanide	160	2,300	2,300	NS	160	NS	2,300	NS
Potassium Silver Cyanide	390	500	500	500	390	NS	5,800	NS
Silver Cyanide	500	500	500	500	7,800	NS	120,000	NS
Thiocyanates	16	230	230	NS	16	NS	230	NS
Zinc Cyanide	3,900	5,000	5,000	5,000	3,900	NS	58,000	NS
Cyclohexane	6,500	27,000	27,000	NS	6,500	NS	27,000	NS
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	27	110	110	NS	27	NS	110	NS
Cyclohexanone	28,000	130,000	130,000	NS	28,000	NS	130,000	NS
Cyclohexene	310	3,100	3,100	NS	310	NS	3,100	NS
Cyclohexylamine	16,000	23,000	23,000	NS	16,000	NS	23,000	NS
Cyhalothrin/karate	63	820	820	NS	63	NS	820	NS
Cyromazine	32000	415,000	415,000	NS	32,000	NS	415,000	NS
DDD	1.0	1.0	1.0	1.0	1.9	2.7	9.6	750.0
DDE, p,p'-	1.0	1.0	1.0	1.0	2.0	1.9	9.3	1100.0
DDT	1.0	1.0	1.0	1.0	1.9	1.9	8.5	4.3
Dacthal (Chlorthal-dimethyl	6,300	8,200	8,200	NS		NS	8,200	NS
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	440	3,300	3,300	NS	440	NS	3,300	NS
Demeton	2.5	33	33	NS	2.5	NS	33	NS
Diallate	8.9	38	38	NS	8.9	NS	38	NS
Diazinon	44	570	570	NS	44	NS	570	NS
Dibenzothiophene	780	12,000	12,000	NS	780	NS	12,000	NS
Dibromobenzene, 1,4-	780	12,000	12,000	NS	780	NS	12,000	NS

TABLE 5
SUMMARY OF THRESHOLD CONCENTRATIONS FOR VOCs, SVOCs, PCBs, ORGANOCHLORINE PESTICIDES, AND OTHER CONSTITUENTS WITHOUT WATER QUALITY OBJECTIVES
BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
Dibromomethane (Methylene Bromide)	24	99	99	NS	24	NS	99	NS
Dibutyltin Compounds	19	250	250	NS	19	NS	250	NS
Dicamba	1,900	25,000	25,000	NS	1,900	NS	25,000	NS
Dichloro-2-butene, 1,4-	0.0021	0.0094	0.0094	NS	0.0021	NS	0.0094	NS
Dichloro-2-butene, cis-1,4-	0.0074	0.032	0.032	NS	0.0074	NS	0.032	NS
Dichloro-2-butene, trans-1,4-	0.0074	0.032	0.032	NS	0.0074	NS	0.032	NS
Dichlorobenzidine, 3,3'-	1.2	5.1	5.1	NS	1.2	0.012	5.1	0.012
Dichlorobenzophenone, 4,4'-	570	7,400	7,400	NS	570	NS	7,400	NS
Dichlorodifluoromethane	87	370	370	NS	87	NS	370	NS
Dichlorophenol, 2,4-	190	2,500	2,500	NS	190	NS	2,500	NS
Butanoic Acid, 4-(2,4-Dichlorophenoxy)-	1900	25,000	25,000	NS	1,900	NS	25,000	NS
Dichloropropane, 1,3-	1,600	23,000	23,000	NS	1,600	0.059	23,000	0.059
Dichloropropanol, 2,3-	190	2,500	2,500	NS	190	NS	2,500	NS
Dichlorvos	1.9	7.9	7.9	NS	1.9	NS	7.9	NS
Dicyclopentadiene	1.3	5.4	5.4	NS	1.3	NS	5.4	NS
Dieldrin	0.034	0.14	0.14	8.0	0.034	0.00017	0.14	0.00017
Diethanolamine	130	1,600	1,600	NS	130	NS	1,600	NS
Diethylene Glycol Monobutyl Ether	1,900	24,000	24,000	NS	1,900	NS	24,000	NS
Diethylene Glycol Monoethyl Ether	3,800	48,000	48,000	NS	3,800	NS	48,000	NS
Diethylformamide	78	1,200	1,200	NS	78	NS	1,200	NS
Diethylstilbestrol	0.0016	0.0066	0.0066	NS	0.0016	NS	0.0066	NS
Difenzoquat	5,200	68,000	68,000	NS	5,200	NS	68,000	NS
Diflubenzuron	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Difluoroethane, 1,1-	48,000	200,000	200,000	NS	48,000	NS	200,000	NS
Dihydrosafrole	9.9	45	45	NS	9.9	NS	45	NS
Diisopropyl Ether	2,200	9,400	9,400	NS	2,200	NS	9,400	NS
Diisopropyl Methylphosphonate	6,300	93,000	93,000	NS	6,300	NS	93,000	NS
Dimethipin	1,400	18,000	18,000	NS	1,400	NS	18,000	NS
Dimethoate	140	1,800	1,800	NS	140	NS	1,800	NS
Dimethoxybenzidine, 3,3'-	0.34	1.4	1.4	NS	0.34	NS	1.4	NS
Dimethyl methylphosphonate	320	1,400	1,400	NS	320	NS	1,400	NS
Dimethylamino azobenzene [p-]	0.12	0.50	0.50	NS	0.12	NS	0.50	NS
Dimethylaniline HCl, 2,4-	0.94	4.0	4.0	NS	0.94	NS	4.0	NS
Dimethylaniline, 2,4-	2.7	11	11	NS	2.7	NS	11	NS
Dimethylaniline, N,N-	76	120	120	NS	26	NS	120	NS
Dimethylbenzidine, 3,3'-	0.049	0.21	0.21	NS	0.049	NS	0.21	NS
Dimethylformamide	2,600	15,000	15,000	NS	2,600	NS	15,000	NS
Dimethylhydrazine, 1,1-	0.057	0.24	0.24	NS	0.057	NS	0.24	NS
Dimethylhydrazine, 1,2-	0.00088	0.0041	0.0041	NS	0.00088	NS	0.0041	NS
Dimethylphenol, 2,4-	1,300	16,000	16,000	NS	1,300	0.67	16,000	0.67
Dimethylphenol, 2,6-	38	490	490	NS	38	NS	490	NS
Dimethylphenol, 3,4-	63	820	820	NS	63	NS	820	NS
Dimethylvinylchloride	1.1	4.8	4.8	NS	1.1	NS	4.8	NS
Dinitro-o-cresol, 4,6-	5.1	66	66	NS	5.1	NS	66	NS
Dinitro-o-cyclohexyl Phenol, 4,6-	130	1,600	1,600	NS	130	NS	1,600	NS
Dinitrobenzene, 1,2-	6.3	82	82	NS	6.3	NS	82	NS
Dinitrobenzene, 1,3-	6.3	82	82	NS	6.3	NS	82	NS
Dinitrobenzene, 1,4-	6.3	82	82	NS	6.3	NS	82	NS
Dinitrophenol, 2,4-	130	1,600	1,600	NS	130	0.11	1,600	0.11
Dinitrotoluene Mixture, 2,4/2,6-	0.80	7.4	7.4	NS	0.80	NS	7.4	NS
Dinitrotoluene, 2,4-	1.7	7.4	7.4	NS	1.7	0.0018	7.4	0.0018
Dinitrotoluene, 2,6-	0.36	1.5	1.5	NS	0.36	NS	1.5	NS
Dinitrotoluene, 2-Amino-4,6-	150	2,300	2,300	NS	150	NS	2,300	NS
Dinitrotoluene, 4-Amino-2,6-	150	2,300	2,300	NS	150	NS	2,300	NS
Dinitrotoluene, Technical grade	1.2	5.1	5.1	NS	1.2	NS	5.1	NS
Dioxane, 1,4-	5.3	24	24	NS	5.3	0.00023	24	0.00023
Hexachlorodibenzo-p-dioxin, Mixture	0.00010	0.00047	0.00047	NS	0.00010	NS	0.00047	NS

TABLE 5
SUMMARY OF THRESHOLD CONCENTRATIONS FOR VOCs, SVOCs, PCBs, ORGANOCHLORINE PESTICIDES, AND OTHER CONSTITUENTS WITHOUT WATER QUALITY OBJECTIVES
BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
Diphenamid	1,900	25,000	25,000	NS	1,900	NS	25,000	NS
Diphenyl Sulfone	51	660	660	NS	51	NS	660	NS
Diphenylamine	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Diphenylhydrazine, 1,2-	0.68	2.9	2.9	NS	0.68	NS	2.9	NS
Direct Black 38	0.076	0.32	0.32	NS	0.076	NS	0.32	NS
Direct Blue 6	0.073	0.31	0.31	NS	0.073	NS	0.31	NS
Direct Brown 95	0.081	0.34	0.34	NS	0.081	NS	0.34	NS
Disulfoton	2.5	33	33	NS	2.5	NS	33	NS
Dithiane, 1,4-	780	12,000	12,000	NS	780	NS	12,000	NS
Diuron	130	1,600	1,600	NS	130	NS	1,600	NS
Dodine	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
EPTC	3,900	28,000	58,000	NS	3,900	NS	58,000	NS
Endosulfan	470	7,000	7,000	NS	470	0.0046	7,000	0.0046
Epichlorohydrin	19	82	82	NS	19	NS	82	NS
Epoxybutane, 1,2-	160	670	670	NS	160	NS	670	NS
Ethephon	320	4,100	4,100	NS	320	NS	4,100	NS
Ethion	32	410	410	NS	32	NS	410	NS
Ethoxyethanol Acetate, 2-	2,600	14,000	14,000	NS	2,600	NS	14,000	NS
Ethoxyethanol, 2-	5,200	47,000	47,000	NS	5,200	NS	47,000	NS
Ethyl Acetate	620	2,600	2,600	NS	620	NS	2,600	NS
Ethyl Acrylate	47	210	210	NS	47	NS	210	NS
Ethyl Chloride (Chloroethane)	14,000	57,000	57,000	NS	14,000	NS	57,000	NS
Ethyl Ether	16,000	230,000	230,000	NS	16,000	NS	230,000	NS
Ethyl Methacrylate	1,800	7,600	7,600	NS	1,800	NS	7,600	NS
Ethyl-p-nitrophenyl Phosphonate	0.63	8.2	8.2	NS	0.630	NS	8.2	NS
Ethylene Cyanohydrin	4,400	57,000	57,000	NS	4,400	NS	57,000	NS
Ethylene Diamine	7,000	110,000	110,000	NS	7,000	NS	110,000	NS
Ethylene Glycol	130,000	1,600,000	1,600,000	NS	130,000	NS	1,600,000	NS
Ethylene Glycol Monobutyl Ether	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Ethylene Oxide	0.00	0.03	0.03	NS	0.002	NS	0.025	NS
Ethylene Thiourea	5.1	51	51	NS	5.1	NS	51	NS
Ethyleneimine	0.0027	0.012	0.012	NS	0.0027	NS	0.012	NS
Ethylphthalyl Ethyl Glycolate	190,000	2,500,000	2,500,000	NS	190,000	NS	2,500,000	NS
Tribenuron-methyl (Express)	510	6,600	6,600	NS	510	NS	6,600	NS
Fenamiphos	16	210	210	NS	16	NS	210	NS
Fenpropathrin	1,600	21,000	21,000	NS	1,600	NS	21,000	NS
Fluometuron	820	11,000	11,000	NS	820	NS	11,000	NS
Fluoride	3,100	47,000	47,000	18,000	3,100	NS	47,000	NS
Fluridone	5,100	66,000	66,000	NS	5,100	NS	66,000	NS
Flurprimidol	2,500	33,000	33,000	NS	2,500	NS	33,000	NS
Flutolanil	32,000	410,000	410,000	NS	32,000	NS	410,000	NS
Fluvalinate	630	8,200	8,200	NS	630	NS	8,200	NS
Folpet	5,700	74,000	74,000	NS	5,700	NS	74,000	NS
Fomesafen	160	2,100	2,100	NS	160	NS	2,100	NS
Fonofos	130	1,600	1,600	NS	130	NS	1,600	NS
Formaldehyde	11	50	50	NS	11	NS	50	NS
Formic Acid	29	120	120	NS	29	NS	120	NS
Furans	-	-	-	-	-	-	-	-
-Dibenzofuran	73	1,000	1,000	NS	73	NS	1,000	NS
-Furan	73	1,000	1,000	NS	73	NS	1,000	NS
-Tetrahydrofuran	18,000	96,000	96,000	NS	18,000	NS	94,000	NS
Furazolidone	0.14	0.60	0.60	NS	0.14	NS	0.60	NS
Furfural	210	2,600	2,600	NS	210	NS	2,600	NS
Furium	0.36	1.5	1.5	NS	0.36	NS	1.5	NS
Furmecyclox	18	77	77	NS	18	NS	77	NS
Glufosinate, Ammonium	350	4,900	4,900	NS	380	NS	4,900	NS
Glutaraldehyde	6,000	70,000	70,000	NS	6,000	NS	70,000	NS

TABLE 5
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BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
Glycidyl	23	210	210	NS	23	NS	210	NS
Goal (oxyfluorfen)	7.4	31	31	NS	7.4	NS	31	NS
Guanidine	780	12,000	12,000	NS	780	NS	12,000	NS
Guanidine Chloride	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Guthion (Azinphos-methyl)	190	2,500	2,500	NS	190	NS	2,500	NS
Haloxyfop, Methyl	3.2	41	41	NS	3.2	NS	41	NS
Harmony (Thifensulfuron-methyl)	2,700	35,000	35,000	NS	2,700	NS	35,000	NS
Hexabromobenzene	160	2,300	2,300	NS	160	NS	2,300	NS
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	13	160	160	NS	13	NS	160	NS
Hexachlorobutadiene	1.2	5.3	5.3	NS	1.2	0.68	5.3	0.68
Hexachlorocyclohexane, Alpha-	0.086	0.36	0.36	NS	0.086	NS	0.36	NS
Lindane, Hexachlorocyclohexane, Beta-	0.57	2.5	2.5	NS	0.57	0.0098	2.5	0.0098
Hexachlorocyclohexane, Technical	0.30	1.3	1.3	NS	0.30	NS	1.3	NS
Hexachloroethane	1.8	8.0	8.0	NS	1.8	1.1	8.0	1.1
Hexachlorophene	19	250	250	NS	19	NS	250	NS
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	8.3	38	38	NS	8.3	NS	38	NS
Hexamethylene Diisocyanate, 1,6-	3.1	13	13	NS	3.1	NS	13	NS
Hexamethylphosphoramide	25	330	330	NS	25	NS	330	NS
Hexane, N-	610	2,500	2,500	NS	610	NS	2,500	NS
Hexanedioic Acid	130,000	>1 kg/kg	>1 kg/kg	NS	130,000	NS	1,600,000	NS
Hexanone, 2-	200	1,300	1,300	NS	200	NS	1,300	NS
Hexazinone	2,100	27,000	27,000	NS	2,100	NS	27,000	NS
Hydrazine	0.03	0.14	0.14	NS	0.032	NS	0.14	NS
Hydrazine Sulfate	0.23	1.1	1.1	NS	0.23	NS	1.1	NS
Hydrogen Chloride	2.80E+07	1.20E+08	1.20E+08	NS	2.80E+07	NS	1.20E+08	NS
Hydrogen Fluoride	3,100	47,000	47,000	NS	3,100	NS	47,000	NS
Hydrogen Sulfide	2.80E+06	1.20E+07	1.20E+07	NS	2.80E+06	NS	1.20E+07	NS
Hydroquinone	9.0	38	38	NS	9.0	NS	38	NS
Imazalil	8.9	38	38	NS	8.9	NS	38	NS
Imazaquin	16,000	210,000	210,000	NS	16,000	NS	210,000	NS
Iodine	780	12,000	12,000	NS	780	NS	12,000	NS
Iprodione	2,500	33,000	33,000	NS	2,500	NS	33,000	NS
Isobutyl Alcohol	23,000	350,000	350,000	NS	23,000	NS	350,000	NS
Isophorone	570	2,400	2,400	NS	570	NS	2,400	NS
Isopropalin	1,200	18,000	18,000	NS	1,200	NS	18,000	NS
Isopropanol	5,600	24,000	24,000	NS	5,600	NS	24,000	NS
Isopropyl Methyl Phosphonic Acid	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Isoxaben	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
JP-7	4.30E+08	1.80E+09	1.80E+09	NS	4.30E+08	NS	1.80E+09	NS
Kerb (Propyzamide)	4,700	62,000	62,000	NS	4,700	NS	62,000	NS
Lactofen	510	6,600	6,600	NS	510	NS	6,600	NS
Tetraethyl Lead	0.0078	0.12	0.12	13	0.0078	NS	0.12	NS
Linuron	490	6,300	6,300	NS	490	NS	6,300	NS
Lithium	160	2,300	2,300	NS	160	NS	2,300	NS
Londax (Bensulfuron-methyl)	13,000	160,000	160,000	NS	13,000	NS	160,000	NS
MCPA	32	410	410	NS	32	NS	410	NS
MCPB	280	3,600	3,600	NS	280	NS	3,600	NS
MCPP	63	820	820	NS	63	NS	820	NS
Malathion	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Maleic Anhydride	6,300	80,000	80,000	NS	6,300	NS	80,000	NS
Maleic Hydrazide	32,000	410,000	410,000	NS	32,000	NS	410,000	NS
Malononitrile	6.3	82	82	NS	6.3	NS	82	NS
Mancozeb	1,900	25,000	25,000	NS	1,900	NS	25,000	NS
Maneb	320	4,100	4,100	NS	320	NS	4,100	NS
Mephosfolan	5.7	74	74	NS	5.7	NS	74	NS
Mepiquat Chloride	1,900	25,000	25,000	NS	1,900	NS	25,000	NS
Mercury Compounds								

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ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
-Methyl Mercury	7.8	120	120	NS	7.8	6.3	120	NS
-Phenylmercuric Acetate	5.1	66	66	NS	5.1	NS	66	NS
Merphos	2.3	35	35	NS	2.3	NS	35	NS
Merphos Oxide	6.3	82	82	NS	6.3	NS	82	NS
Metalaxyl	3,800	49,000	49,000	NS	3,800	NS	49,000	NS
Methacrylonitrile	7.5	100	100	NS	7.5	NS	100	NS
Methamidophos	3.2	41	41	NS	3.2	NS	41	NS
Methanol	120,000	1,200,000	1,200,000	NS	120,000	NS	1,200,000	NS
Methidathion	95	1,200	1,200	NS	95	NS	1,200	NS
Methomyl	1,600	21,000	21,000	NS	1,600	NS	21,000	NS
Methoxy-5-nitroaniline, 2-	11	47	47	NS	11	NS	47	NS
Methoxyethanol Acetate, 2-	110	510	510	NS	110	NS	510	NS
Methoxyethanol, 2-	320	4,100	4,100	NS	320	NS	4,100	NS
Methyl Acetate	78,000	1,200,000	1,200,000	NS	78,000	NS	1,200,000	NS
Methyl Acrylate	150	610	610	NS	150	NS	610	NS
Methyl Ethyl Ketone (2-Butanone)	27,000	190,000	190,000	NS	27,000	5.1	190,000	5.1
Methyl Hydrazine	0.14	0.62	0.62	NS	0.14	NS	0.62	NS
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	33,000	140,000	140,000	NS	33,000	2.8	140,000	2.8
Methyl Isocyanate	4.6	19	19	NS	4.6	NS	19	NS
Methyl Methacrylate	4,400	19,000	19,000	NS	4,400	NS	19,000	NS
Methyl Parathion	16	210	210	NS	16	NS	210	NS
Methyl Phosphonic Acid	3800	49,000	49,000	NS	3,800	NS	49,000	NS
Methyl Styrene (Mixed Isomers)	320	2,600	2,600	NS	320	NS	2,600	NS
Methyl methanesulfonate	5.5	23	23	NS	5.5	NS	23	NS
Methyl-1,4-benzenediamine dihydrochloride, 2-	19	250	250	NS	19	NS	250	NS
Methyl-5-Nitroaniline, 2-	60	260	260	NS	60	NS	260	NS
Methyl-N-nitro-N-nitrosoguanidine, N-	0.065	0.28	0.28	NS	0.065	NS	0.28	NS
Methylaniline Hydrochloride, 2-	4	18	18	NS	4.2	NS	18	NS
Methylarsonic acid	630	8,200	8,200	NS	630	NS	8,200	NS
Methylbenzene,1-4-diamine monohydrochloride, 2-	13	160	160	NS	13	NS	160	NS
Methylbenzene-1,4-diamine sulfate, 2-	5.4	23	23	NS	5.4	NS	23	NS
Methylcholanthrene, 3-	0.0055	0.10	0.10	NS	0.0055	NS	0.10	NS
Methylene-bis(2-chloroaniline), 4,4'-	1.2	23	23	NS	1.2	NS	23	NS
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	12	50	50	NS	12	NS	50	NS
Methylenebisbenzenamine, 4,4'-	0.34	1.4	1.4	NS	0.34	NS	1.4	NS
Methylenediphenyl Diisocyanate	850,000	3,600,000	3,600,000	NS	850,000	NS	3,600,000	NS
Methylstyrene, Alpha-	5,500	82,000	82,000	NS	5,500	NS	82,000	NS
Metolachlor	9,500	120,000	120,000	NS	9,500	NS	120,000	NS
Metribuzin	1,600	21,000	21,000	NS	1,600	NS	21,000	NS
Mineral oils	230,000	3,500,000	3,500,000	NS	230,000	NS	3,500,000	NS
Mirex	0.036	0.17	0.17	21	0.036	NS	0.17	NS
Monomethylaniline	130	1,600	1,600	NS	130	NS	1,600	NS
N,N'-Diphenyl-1,4-benzenediamine	19	250	250	NS	19	NS	250	NS
Naled	160	2,300	2,300	NS	160	NS	2,300	NS
Naphtha, High Flash Aromatic (HFAN)	2,300	35,000	35,000	NS	2,300	NS	35,000	NS
Naphthylamine, 2-	0.30	1.3	1.3	NS	0.30	NS	1.3	NS
Napropamide	7,600	98,000	98,000	NS	7,600	NS	98,000	NS
Nickel Carbonyl	820	11,000	11,000	2,000	820	NS	11,000	NS
Nickel Oxide	840	12,000	12,000	2,000	840	NS	12,000	NS
Nickel Refinery Dust	820	11,000	11,000	2,000	820	NS	11,000	NS
Nickel Soluble Salts	1,500	22,000	22,000	2,000	1,500	NS	22,000	NS
Nickel Subsulfide	0.41	1.9	1.9	2,000	0.41	NS	1.9	NS
Nitroaniline, 2-	630	8,000	8,000	NS	630	NS	8,000	NS
Nitroaniline, 4-	27	110	110	NS	27	NS	110	NS
Nitrobenzene	5.1	22	22	NS	5.1	NS	22	NS
Nitrocellulose	1.90E+08	2.50E+09	2.50E+09	NS	1.90E+08	NS	2.50E+09	NS
Nitrofurantoin	4,400	57,000	57,000	NS	4,400	NS	57,000	NS

TABLE 5
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BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
Nitrofurazone	0.42	1.8	1.8	NS	0.42	NS	1.8	NS
Nitroglycerin	6.3	82	82	NS	6.3	NS	82	NS
Nitroguanidine	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
Nitromethane	5.4	24	24	NS	5.4	NS	24	NS
Nitropropane, 2-	0.064	0.28	0.28	NS	0.064	NS	0.280	NS
Nitroso-N-ethylurea, N-	0.0045	0.085	0.085	NS	0.0045	NS	0.085	NS
Nitroso-N-methylurea, N-	0.0010	0.019	0.019	NS	0.0010	NS	0.019	NS
Nitroso-di-N-butylamine, N-	0.099	0.46	0.46	NS	0.099	NS	0.46	NS
Nitroso-di-N-propylamine, N-	0.078	0.33	0.33	NS	0.078	NS	0.33	NS
Nitrosodiethanolamine, N-	0.19	0.82	0.82	NS	0.19	NS	0.82	NS
Nitrosodiethylamine, N-	0.00081	0.015	0.015	NS	0.00081	NS	0.015	NS
Nitrosodimethylamine, N-	0.0020	0.034	0.034	NS	0.0020	NS	0.034	NS
Nitrosodiphenylamine, N-	110	470	470	NS	110	NS	470	NS
Nitrosomethylethylamine, N-	0.020	0.091	0.091	NS	0.020	NS	0.091	NS
Nitrosomorpholine [N-]	0.081	0.34	0.34	NS	0.081	NS	0.34	NS
Nitrosopiperidine [N-]	0.058	0.24	0.24	NS	0.058	NS	0.24	NS
Nitrosopyrrolidine, N-	0.26	1.1	1.1	NS	0.26	NS	1.1	NS
Nitrotoluene, m-	6.3	82	82	NS	6.3	NS	82	NS
Nitrotoluene, o-	3.2	15	15	NS	3.2	NS	15	NS
Nitrotoluene, p-	34	140	140	NS	34	NS	140	NS
Nonane, n-	11	72	72	NS	11	NS	72	NS
Norflurazon	950	12,000	12,000	NS	950	NS	12,000	NS
Nustar (Flusilazole)	130	1,600	1,600	NS	130	NS	1,600	NS
Octabromodiphenyl Ether	190	2,500	2,500	NS	190	NS	2,500	NS
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	3,900	57,000	57,000	NS	3,900	NS	57,000	NS
Octamethylpyrophosphoramide	130	1,600	1,600	NS	130	NS	1,600	NS
Oryzalin	70	290	290	NS	70	NS	290	NS
Oxadiazon	320	4,100	4,100	NS	320	NS	4,100	NS
Paclobutrazol	820	11,000	11,000	NS	820	NS	11,000	NS
Paraquat Dichloride	280	3,700	3,700	NS	280	NS	3,700	NS
Parathion	380	4,900	4,900	NS	380	NS	4,900	NS
Pebulate	3,900	58,000	58,000	NS	3,900	NS	58,000	NS
Pendimethalin	19,000	250,000	250,000	NS	19,000	NS	250,000	NS
Pentabromodiphenyl Ether	160	2,300	2,300	NS	160	NS	2,300	NS
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	6.3	82	82	NS	6.3	NS	82	NS
Pentachlorobenzene	63	930	930	NS	63	NS	930	NS
Pentachloroethane	7.7	36	36	NS	7.7	NS	36	NS
Pentachloronitrobenzene	2.7	13	13	NS	2.7	NS	13	NS
Pentaerythritol tetranitrate (PETN)	130	570	570	NS	130	NS	570	NS
Pentane, n-	810	3,400	3,400	NS	810	NS	3,400	NS
Perchlorates	-	-	-	-	-	-	-	-
-Ammonium Perchlorate	55	820	820	NS	55	NS	820	NS
-Lithium Perchlorate	55	820	820	NS	55	NS	820	NS
-Potassium Perchlorate	55	820	820	NS	55	NS	820	NS
-Sodium Perchlorate	55	820	820	NS	55	NS	820	NS
Permethrin	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
Phenacetin	250	1,000	1,000	NS	250	NS	1,000	NS
Phenmedipham	16,000	210,000	210,000	NS	15,000	NS	200,000	NS
Phenol	19,000	250,000	250,000	NS	19,000	0.076	250,000	0.076
Phenothiazine	32	410	410	NS	32	NS	410	NS
Phenylenediamine, m-	380	4,900	4,900	NS	380	NS	4,900	NS
Phenylenediamine, o-	4.5	19	19	NS	4.5	NS	19	NS
Phenylenediamine, p-	63	820	820	NS	63	NS	820	NS
Phenylphenol, 2-	280	1,200	1,200	NS	280	NS	1,200	NS
Phorate	13	160	160	NS	13	NS	160	NS
Phosgene	0.31	1.3	1.3	NS	0.31	NS	1.3	NS
Phosmet	1,300	16,000	16,000	NS	1,300	NS	16,000	NS

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ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
Phosphates, Inorganic								
-Aluminum metaphosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Ammonium polyphosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Calcium pyrophosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Diammonium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Dicalcium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Dimagnesium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Dipotassium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Disodium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Monoaluminum phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Monoammonium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Monocalcium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Monomagnesium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Monopotassium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Monosodium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Polyphosphoric acid	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Potassium tripolyphosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Sodium acid pyrophosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Sodium aluminum phosphate (acidic)	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Sodium aluminum phosphate (anhydrous)	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Sodium aluminum phosphate (tetrahydrate)	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Sodium hexametaphosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Sodium polyphosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Sodium trimetaphosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Sodium tripolyphosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Tetrapotassium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Tetrasodium pyrophosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Tricalcium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Trimagnesium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Tripotassium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
-Trisodium phosphate	3.80E+06	5.70E+07	5.70E+07	NS	3.80E+06	NS	5.70E+07	NS
Phosphine	23	350	350	NS	23	NS	350	NS
Phosphoric Acid	3.00E+06	2.90E+07	2.90E+07	NS	3.00E+06	NS	2.90E+07	NS
Phosphorus, White	1.6	23	23	NS	1.6	NS	23	NS
Phthalates								
-Butylphthalyl Butylglycolate	63,000	820,000	820,000	NS	63,000	NS	820,000	NS
-Dibutyl Phthalate	6,300	82,000	82,000	NS	6,300	NS	82,000	NS
-Diethyl Phthalate	51,000	660,000	660,000	NS	51,000	NS	660,000	NS
-Dimethylterephthalate	7,800	120,000	120,000	NS	7,800	NS	120,000	NS
-Octyl Phthalate, di-N-	630	8,200	8,200	NS	630	NS	8,200	NS
-Phthalic Acid, P-	63,000	820,000	820,000	NS	63,000	NS	820,000	NS
-Phthalic Anhydride	130,000	>1 kg/kg	>1 kg/kg	NS	130,000	NS	1,600,000	NS
Picramic Acid (2-Amino-4,6-dinitrophenol)	6.3	82	82	NS	6.3	NS	82	NS
Pirimiphos, Methyl	4.4	57	57	NS	4.4	NS	57	NS
Polybrominated Biphenyls	0.018	0.077	0.077	NS	0.018	NS	0.077	NS
Polychlorinated Biphenyls (PCBs)								
-Aroclor 1016	4.1	27	27	50	4.1	0.25	27	6.3
-Aroclor 1221	0.20	0.83	0.83	50	0.20	0.25	0.83	6.3
-Aroclor 1232	0.17	0.72	0.72	50	0.17	0.25	0.72	6.3
-Aroclor 1242	0.23	0.95	0.95	50	0.23	0.25	0.95	6.3
-Aroclor 1248	0.23	0.95	0.95	50	0.23	0.25	0.95	6.3
-Aroclor 1254	0.24	0.97	0.97	50	0.24	0.25	0.97	6.3
-Aroclor 1260	0.24	0.99	0.99	50	0.24	0.25	0.99	6.3
-Aroclor 5460	35	50	50	50	35	0.25	440	6.3
-Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	0.13	0.52	0.52	50	0.13	0.25	0.52	6.3

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				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
-Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	0.12	0.52	0.52	50	0.12	0.25	0.52	6.3
-Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	0.12	0.53	0.53	50	0.12	0.25	0.53	6.3
-Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	0.12	0.53	0.53	50	0.12	0.25	0.53	6.3
-Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	0.00012	0.00052	0.00052	50	0.00012	0.25	0.00052	6.3
-Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	0.12	0.50	0.50	50	0.12	0.25	0.50	6.3
-Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	0.12	0.50	0.50	50	0.12	0.25	0.50	6.3
-Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	0.12	0.50	0.50	50	0.12	0.25	0.50	6.3
-Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	0.12	0.51	0.51	50	0.12	0.25	0.51	6.3
-Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126) -	0.000036	0.00015	0.00015	50	0.000036	0.25	0.00015	6.3
-Polychlorinated Biphenyls (high risk)	0.23	0.94	0.94	50	0.23	0.25	0.94	6.3
-Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	0.038	0.16	0.16	50	0.038	0.25	0.16	6.3
-Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	0.012	0.049	0.049	50	0.012	0.25	0.049	6.3
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	850,000	3,600,000	3,600,000	NS	850,000	NS	3,600,000	NS
Polynuclear Aromatic Hydrocarbons (PAHs)								
-Acenaphthene	3,600	45,000	45,000	NS	3,600	16	45,000	16
-Anthracene	18,000	230,000	230,000	NS	18,000	2.8	230,000	2.8
-Benz[a]anthracene	1.1	21	21	NS	1.1	0.16	21	12
-Benzo(j)fluoranthene	0.42	1.8	1.8	NS	0.42	NS	1.8	NS
-Benzo[b]fluoranthene	1.1	21	21	NS	1.1	0.16	21	46
-Benzo[k]fluoranthene	11	210	210	NS	11	1.6	210	2.6
-Chloronaphthalene, Beta-	4,800	60,000	60,000	NS	4,800	NS	60,000	NS
-Chrysene	110	2,100	2,100	NS	110	3.8	2,100	3.8
-Dibenz[a,h]anthracene	0.11	2.1	2.1	NS	0.11	0.016	2.1	9.9
-Dibenzo(a,e)pyrene	0.042	0.18	0.18	NS	0.042	NS	0.18	NS
-Dimethylbenz(a)anthracene, 7,12-	0.00046	0.0084	0.0084	NS	0.00046	NS	0.0084	NS
-Fluoranthene	2,400	30,000	30,000	NS	2,400	60	30,000	60
-Fluorene	2,400	30,000	30,000	NS	2,400	8.9	30,000	8.9
-Indeno[1,2,3-cd]pyrene	1.1	21	21	NS	1.1	0.16	210	9.1
-Methylnaphthalene, 1-	18	73	73	NS	18	NS	73	NS
-Methylnaphthalene, 2-	240	3,000	3,000	NS	240	0.25	3,000	0.25
-Naphthalene	3.8	17	17	NS	3.8	0.033	17	0.033
-Nitropyrene, 4-	0.42	1.8	1.8	NS	0.42	NS	1.8	NS
-Pyrene	1,800	23,000	23,000	NS	1,800	85	23,000	85
Prochloraz	3.6	15	15	NS	3.6	NS	15	NS
Profluralin	470	7,000	7,000	NS	470	NS	7,000	NS
Prometon	950	12,000	12,000	NS	950	NS	12,000	NS
Prometryn	2,500	33,000	33,000	NS	2,500	NS	33,000	NS
Propachlor	820	11,000	11,000	NS	820	NS	11,000	NS
Propanil	320	4,100	4,100	NS	320	NS	4,100	NS
Propargite	2.8	12	12	NS	2.8	NS	12	NS
Propargyl Alcohol	160	2,300	2,300	NS	160	NS	2,300	NS
Propazine	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Propham	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Propiconazole	6300	82,000	82,000	NS	6,300	NS	82,000	NS
Propionaldehyde	75	310	310	NS	75	NS	310	NS
Propyl benzene	3,800	24,000	24,000	NS	3,800	NS	24,000	NS
Propylene	2,200	9,300	9,300	NS	2,200	NS	9,300	NS
Propylene Glycol	1,300,000	16,000,000	16,000,000	NS	1,300,000	NS	16,000,000	NS
Propylene Glycol Dinitrate	390,000	1,600,000	1,600,000	NS	390,000	NS	1,600,000	NS
Propylene Glycol Monomethyl Ether	41,000	370,000	370,000	NS	41,000	NS	370,000	NS
Propylene Oxide	2.1	9.7	9.7	NS	2.1	NS	9.7	NS
Pursuit (Pendimethalin)	19,000	250,000	250,000	NS	19,000	NS	250,000	NS
Pydrin (Fenvalerate)	1,600	21,000	21,000	NS	1,600	NS	21,000	NS
Pyridine	78	1,200	1,200	NS	78	NS	1,200	NS
Quinalphos	32	410	410	NS	32	NS	410	NS
Quinoline	0.18	0.77	0.77	NS	0.18	NS	0.77	NS
Resmethrin	1,900	25,000	25,000	NS	1,900	NS	25,000	NS

TABLE 5
SUMMARY OF THRESHOLD CONCENTRATIONS FOR VOCs, SVOCs, PCBs, ORGANOCHLORINE PESTICIDES, AND OTHER CONSTITUENTS WITHOUT WATER QUALITY OBJECTIVES
BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
Ronnel	3,900	58,000	58,000	NS	3,900	NS	58,000	NS
Rotenone	250	3,300	3,300	NS	250	NS	3,300	NS
Safrole	0.55	10	10	NS	0.55	NS	10	NS
Savey (Hexythiazox)	1,600	21,000	21,000	NS	1,600	NS	21,000	NS
Selenious Acid	100	100	100	100	390	NS	5,800	NS
Selenium Sulfide	100	100	100	100	390	NS	5,800	NS
Sethoxydim	8,800	110,000	110,000	NS	8,800	NS	110,000	NS
Silica (crystalline, respirable)	4.30E+06	1.80E+07	1.80E+07	NS	4.30E+06	NS	1.80E+07	NS
Sodium Acifluorfen	820	11,000	11,000	NS	820	NS	11,000	NS
Sodium Azide	310	4,700	4,700	NS	310	NS	4,700	NS
Sodium Diethyldithiocarbamate	2.0	8.5	8.5	NS	2.0	NS	8.5	NS
Sodium Fluoride	3,900	18,000	18,000	18,000	3,900	NS	58,000	NS
Sodium Fluoroacetate	1.3	16	16	18,000	1.3	NS	16	NS
Sodium Metavanadate	78	1,200	1,200	NS	78	NS	1,200	NS
Stirofos (Tetrachlorovinphos)	23	96	96	NS	23	NS	96	NS
Strontium, Stable	47,000	700,000	700,000	NS	47,000	NS	700,000	NS
Strychnine	19	250	250	NS	19	NS	250	NS
Sulfolane	63	820	820	NS	63	NS	820	NS
Sulfonylbis(4-chlorobenzene), 1,1'-	51	660	660	NS	51	NS	660	NS
Sulfuric Acid	1,400,000	6,000,000	6,000,000	NS	1,400,000	NS	6,000,000	NS
Systhane (Myclobutanil)	1,600	21,000	21,000	NS	1,600	NS	21,000	NS
TCMTB	1,900	25,000	25,000	NS	1,900	NS	25,000	NS
Tebuthiuron	4,400	57,000	57,000	NS	4,400	NS	57,000	NS
Temephos	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Terbacil	820	11,000	11,000	NS	820	NS	11,000	NS
Terbufos	2.0	2.9	2.9	NS	2.0	NS	2.9	NS
Terbutryn	63	820	820	NS	63	NS	820	NS
Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	6.3	82	82	NS	6.3	NS	82	NS
Tetrachlorobenzene, 1,2,4,5-	23	350	350	NS	23	NS	350	NS
Tetrachloroethane, 1,1,1,2-	2.0	8.8	8.8	NS	2.0	0.01	8.8	0.01
Tetrachlorophenol, 2,3,4,6-	1,900	25,000	25,000	NS	1,900	NS	25,000	NS
Tetrachlorotoluene, p- alpha, alpha, alpha-	0.043	0.20	0.20	NS	0.043	NS	0.20	NS
Tetraethyl Dithiopyrophosphate	32	410	410	NS	32	NS	410	NS
Tetrafluoroethane, 1,1,1,2-	100,000	430,000	430,000	NS	100,000	NS	430,000	NS
Tetryl (Trinitrophenylmethylnitramine)	160	2,300	2,300	NS	160	NS	2,300	NS
Thallium (I) Nitrate	0.78	12	12	700	0.78	NS	12.0	NS
Thallium Acetate	0.78	12	12	700	0.78	NS	12.0	NS
Thallium Carbonate	1.6	23	23	700	1.6	NS	23	NS
Thallium Chloride	0.78	12	12	700	0.78	NS	12.0	NS
Thallium Sulfate	1.6	23	23	700	1.6	NS	23	NS
Thiodiglycol	5,400	79,000	79,000	NS	5,400	NS	79,000	NS
Thiofanox	19	250	250	NS	19	NS	250	NS
Thiophanate, Methyl	47	200	200	NS	47	NS	200	NS
Thiram	950	12,000	12,000	NS	950	NS	12,000	NS
Tin	47,000	700,000	700,000	NS	47,000	NS	700,000	NS
Titanium Tetrachloride	140,000	600,000	600,000	NS	140,000	NS	600,000	NS
Toluene-2,5-diamine	3.0	13	13	NS	3.0	NS	13	NS
Toluidine, p-	18	77	77	NS	18	2.9	77	2.9
Tralomethrin	470	6,200	6,200	NS	470	NS	6,200	NS
Tri-n-butyltin	23	350	350	NS	23	NS	350	NS
Triacetin	5.10E+06	6.60E+07	6.60E+07	NS	5.10E+06	NS	6.60E+07	NS
Triallate	10	46	46	NS	9.7	NS	46	NS
Triasulfuron	630	8,200	8,200	NS	630	NS	8,200	NS
Tribromobenzene, 1,2,4-	390	5,800	5,800	NS	390	NS	5,800	NS
Tributyl Phosphate	60	260	260	NS	60	NS	260	NS
Tributyltin Compounds	19	250	250	NS	19	NS	250	NS
Tributyltin Oxide	19	250	250	NS	19	NS	250	NS

TABLE 5
SUMMARY OF THRESHOLD CONCENTRATIONS FOR VOCs, SVOCs, PCBs, ORGANOCHLORINE PESTICIDES, AND OTHER CONSTITUENTS WITHOUT WATER QUALITY OBJECTIVES
BARSTOW SANITARY LANDFILL

ANALYTE	UNRESTRICTED USE (mg/kg)	UNLINED CELL DISPOSAL LIMITS (mg/kg)	LINED CELL DISPOSAL LIMITS (mg/kg)	REFERENCE CONCENTRATIONS				
				TTLC (mg/kg)	RESIDENTIAL RSL (mg/kg)	ESL - SOIL TIER 1 (mg/kg)	INDUSTRIAL RSL (mg/kg)	ESL - LEACHING TO GROUNDWATER (mg/kg)
Trichloroaniline HCl, 2,4,6-	19	79	79	NS	19	NS	79	NS
Trichloroaniline, 2,4,6-	1.9	25	25	NS	1.9	NS	25	NS
Trichlorobenzene, 1,2,3-	63	930	930	NS	63	NS	930	NS
Trichlorophenol, 2,4,5-	6,300	82,000	82,000	NS	6,300	0.18	82,000	0.18
Trichlorophenol, 2,4,6-	49	210	210	NS	49	0.21	210	0.21
Trichlorophenoxyacetic Acid, 2,4,5-	630	8,200	8,200	NS	630	NS	8,200	NS
Trichloropropane, 1,1,2-	390	5,800	5,800	NS	390	NS	5,800	NS
Trichloropropane, 1,2,3-	0.0051	0.11	0.11	NS	0.0051	NS	0.11	NS
Trichloropropene, 1,2,3-	0.73	3.1	3.1	NS	0.73	NS	3.1	NS
Tricresyl Phosphate (TCP)	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Tridiphane	190	2,500	2,500	NS	190	NS	2,500	NS
Triethylamine	120	480	480	NS	120	NS	480	NS
Trifluralin	90	420	420	NS	90	NS	420	NS
Trimethyl Phosphate	27	110	110	NS	27	NS	110	NS
Trimethylbenzene, 1,2,3-	340	2,000	2,000	NS	340	NS	2,000	NS
Trimethylbenzene, 1,2,4-	300	1,800	1,800	NS	300	NS	1,800	NS
Trimethylbenzene, 1,3,5-	270	1,500	1,500	NS	270	NS	1,500	NS
Trinitrobenzene, 1,3,5-	2,200	32,000	32,000	NS	2,200	NS	32,000	NS
Trinitrotoluene, 2,4,6-	21	96	96	NS	21	NS	96	NS
Triphenylphosphine Oxide	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Tris(1,3-Dichloro-2-propyl) Phosphate	1,300	16,000	16,000	NS	1,300	NS	16,000	NS
Tris(1-chloro-2-propyl)phosphate	630	8,200	8,200	NS	630	NS	8,200	NS
Tris(2-chloroethyl)phosphate	27	110	110	NS	27	NS	110	NS
Tris(2-ethylhexyl)phosphate	170	720	720	NS	170	NS	720	NS
Urethane	0.12	2.3	2.3	NS	0.12	NS	2.3	NS
Vanadium Pentoxide	460	2,000	2,000	2,400	460	NS	2,000	NS
Vernolate	78	1,200	1,200	NS	78	NS	1,200	NS
Vinclozolin	76	980	980	NS	76	NS	980	NS
Vinyl Acetate	910	3,800	3,800	NS	910	NS	3,800	NS
Vinyl Bromide	0.12	0.52	0.52	NS	0.12	NS	0.52	NS
Warfarin	19	250	250	NS	19	NS	250	NS
Xylene, P-	560	2,400	2,400	NS	560	2.3	2,400	2.3
Xylene, m-	550	2,400	2,400	NS	550	2.3	2,400	2.3
Xylene, o-	650	2,800	2,800	NS	650	2.3	2,800	2.3
Zinc Phosphide	23	350	350	5,000	23	NS	350	NS
Zineb	3,200	41,000	41,000	NS	3,200	NS	41,000	NS
Zirconium	6.3	93	93	NS	6.3	NS	93	NS

NOTES:

1. UNRESTRICTED ONSITE USE THRESHOLDS

Threshold concentrations determined utilizing the values in order of priority: 1) RSL for residential sites (USEPA); 2) in absence of RSL, an ESL for "Soil Tier 1" (SFBRWQCB). Material shall not exceed the TTLC (CCR Title 22) threshold regardless of RSL or ESLthreshold values.

2. UNLINED CELL DISPSOSAL THRESHOLDS:

Threshold concentrations determined utilizing the values in order of priority: 1) RSL for industrial sites (USEPA); 2) in absence of RSL, an ESL for "Leaching to Groundwater" (SFBRWQCB). Material shall not exceed the TTLC (CCR Title 22) threshold regardless of RSL or ESLthreshold values.

3. LINED CELL DISPSOSAL THRESHOLDS:

Threshold concentrations are determined by selecting the highest value of 1) Industrial RSL (USEPA), 2) ESL for "Soil Tier 1" (SFBRWQCB); 3) established Background concentrations, and 4) WQOxDAF. Material shall not exceed the TTLC (CCR Title 22) threshold regardless of RSL or ESL threshold values.

4. REFERENCES:

a. TTLC - California Code of Regulations, Title 22, Chapter 11, Article 2.
b. EPA RSLs - U.S. EPA Regional Screening Levels (Formerly PRGs), November 2019, Summary Table (TR=1E-06 and THQ=1.0), https://www.https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables
c. ESLs -San Francisco Bay Regional Water Quality Control Board http://docs.ppsmixeduse.com/ppp/DEIR_References/2016_0222_sfrwqcb_environmentalscreeninglevels.pdf

5. ABBREVIATIONS:

TTLC - Total Threshold Limit Concentration
RSL - Regional Screening Level (USEPA)
ESL - Environmental Screening Level (San Francisco Bay RWQCB)
NS - Not Specified

APPENDIX A

BACKGROUND METALS CONCENTRATION REFERENCE

(Available from the County of San Bernardino Solid Waste Management Division upon request)

APPENDIX B

DILUTION ATTENUATION FACTOR CALCULATIONS

(Available from the County of San Bernardino Solid Waste Management Division upon request)

APPENDIX C

SPECIAL WASTE FORM

SPECIAL WASTE FORM

SAN BERNARDINO COUNTY PUBLIC WORKS

Please fill out entire form, attach analytical results (with chain of custody), location map of soil sample locations, and photos of soil to Joe

I. GENERATOR

Name: _____ Company: _____

Address: _____ City: _____

State/Zip: _____ County: _____

Phone: _____ Email: _____

II. TRANSPORTER (if not Generator)

Name / Company: _____ License #: _____

Address: _____ City: _____

State/Zip: _____ County: _____

Phone: _____ Email: _____

III. WASTE LOCATION (prior to transport):

Name / Company: _____ Address: _____

City: _____ State/Zip: _____

IV. WASTE QUANTITY AND FREQUENCY

Frequency of Disposal Event: ☐ One Time ☐ Daily ☐ Weekly ☐ Monthly

Anticipated Truckloads per Event: _____ Anticipated Volume per Truckload: _____

V. WASTE CHARACTERISTICS

Waste Type: ☐ Industrial ☐ Residential ☐ Commercial ☐ Other_____

Physical State: ☐ Solid ☐ Semi-Solid ☐ Powder ☐ Other _____

Containerized: ☐ Bulk ☐ Drum ☐ Bagged ☐ Other _____

Color: _____ Odor: _____ Moisture, %: _____ Solid, %: _____

Material (Sand, silt, clay, etc): _____

SPECIAL WASTE FORM

This waste ☐ **does** / ☐ **does** not exhibit any of the characteristics of ignitability, corrosivity, reactivity or toxicity as defined in Article 3 of Chapter 11 of Division 4.5, of Title 22 of the California Code of Regulations (22CCR).

This waste ☐ **is** / ☐ **is not** a RCRA hazardous waste as Defined in Article 4 of Chapter 11 of Title 22 CCR.

This waste ☐ **is** / ☐ **is not** a regular Toxic Material as define by Federal or State Regulations.

This waste ☐ **is** / ☐ **is not** a regulated Medical or Infectious Waste as defined by Federal or State regulations,

This waste ☐ **is** / ☐ **is not** a waste generated at a Federal Superfund Clean-Up Site.

Special Handling Instructions: _____

_____

_____

VI. SAMPLE COLLECTION AND ANALYSIS (attach completed Chain of Custody form)

Sample Location (include description and attached photos and location map): _____

_____

Number of Samples Collected: _____

Sample Date(s) and Time(s): _____

Analytical Laboratory Name / City: _____

Analytes: _____

_____

VII. GENERATOR CERTIFICATION

I hereby certify that to the best of my knowledge, the information contained herein is complete, true, and an accurate description of the waste in question for disposal and that all known or suspected hazards have been disclosed. All analytical results submitted are truthful, complete, and representative of the waste. Neither myself nor any employee of my company will deliver waste which is classified as toxic, hazardous, or infectious or any other waste that this facility is prohibited from accepting by law. I shall immediately give written notice of any change of condition pertaining to the waste described herein. Our company agrees to fully indemnify The County of San Bernardino Solid Waste against any damages resulting from this certification being inaccurate or untrue. I certify that the company has not altered the form or content of this waste characterization profile as provided. The undersigned warrants that he/she is authorized to sign this document on behalf of the generator.

_____

Authorized Representative Name and Title and Company (Printed)

_____ _____

Authorized Representative Signature Date

APPENDIX D

WASTE DISCHARGE REQUIREMENT

(Available from the County of San Bernardino Solid Waste Management Division upon request)