APPENDIX G

Air Quality Regulations and Section 94 Handbook

APPENDIX G

Air Quality Regulations

Section 0
Definitions

SECTION 0 - DEFINITIONS

In the Regulations, defined words are CAPITALIZED**.**

0.1 In these Regulations, unless the context otherwise requires:

0.2 "ACT" means the Clean Air Act, as amended, 42 U.S.C. 7401, et seq.

0.3 "ACTUAL EMISSIONS" means the actual rate of EMISSIONS of a pollutant from an EMISSIONS UNIT, as determined in accordance with the following:

(a) In general, ACTUAL EMISSIONS as of a particular date shall equal the average rate, in tons per year, at which the EMISSIONS UNIT actually emitted the pollutant during the two (2) year period which precedes the particular date and which is representative of normal source operation. The CONTROL OFFICER shall allow the use of a different time period upon determination that it is more representative of normal source operation. ACTUAL EMISSIONS shall be calculated using the EMISSIONS UNIT'S actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

(b) The CONTROL OFFICER may presume that source specific ALLOWABLE EMISSIONS for an EMISSIONS UNIT are equivalent to the ACTUAL EMISSIONS of such EMISSIONS UNIT.

(c) For any EMISSIONS UNIT, except as specified in (d), which has not begun normal operations on the particular date, ACTUAL EMISSIONS shall equal the POTENTIAL TO EMIT of such EMISSIONS UNIT on that date.

(d) For an ELECTRIC UTILITY STEAM GENERATING UNIT (other than a new unit or the replacement of an existing unit) ACTUAL EMISSIONS of the unit following the physical or operational change shall equal the representative ACTUAL EMISSIONS of the unit, provided the source owner or operator maintains and submits to the CONTROL OFFICER on an annual basis for a period of five (5) years from the date the unit resumes regular operation, information demonstrating that the physical or operational change did not result in an EMISSIONS

increase. A longer period, not to exceed ten (10) years, may be required by the CONTROL OFFICER if he determines such a period to be more representative of normal source post-change operations.

0.4 "ACTUAL INITIAL START-UP DATE" means the date when any new or Modified EMISSION UNIT within a new or Modified STATIONARY SOURCE COMMENCES operation for any reason.

0.5 "AFFECTED SOURCE" means a source that includes one or more AFFECTED UNITS that are subject to the acid rain requirements under Title IV of the ACT.

0.6 "AFFECTED STATES" means all STATES whose air quality may be affected that are located contiguous to or within 50 miles of Clark County, Nevada, including Arizona, California, and Utah. Any Indian Tribe located in Clark County or within 50 miles of the permitted source shall be considered an AFFECTED STATE.

0.7 "AFFECTED UNIT" means a unit that is subject to any requirement under Title IV of the ACT.

0.8 "AGGRIEVED PARTY" means only the HEALTH DISTRICT or the alleged violator with material interest in the action under consideration.

0.9. "AGRICULTURAL OPERATIONS" means the growing of crops for profit or the growing of crops for the purpose of providing life support to a considerable number of people, animals, or fowl.

0.10 "AIRPLANE REFUELING AREA" means a place capable of receiving, storing and dispensing one or more types of GASOLINE for consumption by airplanes.

0.11 "AIR POLLUTION" means the presence in the outdoor atmosphere of one or more air pollutants or any combination thereof in such quantity and duration as may tend to:

Injure human health or welfare, animal or plant life, or property;

Limit visibility or interfere with scenic, esthetic and historic values of the STATE;

Interfere with the enjoyment of life or property.

0.12 "AIR QUALITY COMMITTEE" means three (3) members appointed by the District Board of Health of Clark County to perform the functions set forth in these Regulations.

0.13 "ALCOHOL MIXTURE" means a mixture of several alcohols, including methanol, ETHANOL, butanol, pentanol, hexanol and others. The ALCOHOL MIXTURE marketed as Octamix (registered trademark) has been approved by the Environmental Protection Agency as an additive for unleaded GASOLINE for blends up to 7-1/2 percent by volume.

0.14 "ALLOWABLE EMISSIONS" means the EMISSIONS rate of a STATIONARY SOURCE calculated using the maximum rated capacity of the source (unless the source is subject to FEDERALLY ENFORCEABLE limits which restrict the operating rate, hours of operation, or both) and the most stringent of the following:

(a) The applicable standards as set forth in 40 CFR parts 60, 61 and 63;

(b) The applicable STATE Implementation Plan (SIP) EMISSIONS limitation, including those with a future compliance date; or

(c) The EMISSIONS rate specified as a FEDERALLY ENFORCEABLE permit condition, including those with a future compliance date.

0.15 "AMBIENT AIR" means that portion of the atmosphere, external to buildings, to which the general public has access. Land owned or controlled by the STATIONARY SOURCE and to which public access is precluded by a fence, physical barriers, or other effective means as approved by the CONTROL OFFICER is exempted from the AMBIENT AIR.

0.16 "APPLICABLE REQUIREMENT" means all of the following as they apply to EMISSION UNITS in a PART 70 SOURCE:

(1) Any standard or requirement included in an applicable STATE Implementation Plan (SIP) approved by EPA or Federal Implementation Plan (FIP) promulgated by EPA under Title I of the ACT, including any revisions to an Implementation Plan promulgated in 40 CFR Part 52.

(2) Any term or condition of any preconstruction permit.

(3) Any requirement under Section 111 (New Source Performance Standards) of the ACT.

(4) Any requirement under Section 112 (HAZARDOUS AIR POLLUTANTS) of the ACT.

(5) Any standard or requirement of the regulations promulgated pursuant to Title IV (Acid Rain) of the ACT.

(6) Any requirements established pursuant to Section 504(b) or Section 114(a)(3) (Monitoring, Analysis and Compliance) of the ACT.

(7) Any requirement relating to solid WASTE INCINERATION under Section 129 (Solid WASTE Combustion) of the ACT.

(8) Any requirement for consumer or commercial products under Section 183(e) (Ozone) of the ACT.

(9) Any requirement for tank vessels under Section 183(f) (Tank Vessel Standards) of the ACT.

(10) Any standard or requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the ACT, unless the EPA determines that any such requirement need not be contained in a PART 70 PERMIT.

(11) Any national AMBIENT AIR quality standard or increment or visibility requirement under Part C of Title 1 of the ACT, but only as it would apply to temporary sources permitted pursuant to Section 504(e) (Temporary Sources) of the ACT.

0.17 "APPLICATION AREA" means the area where surface coating is applied by spraying, dipping or flow-coating techniques.

0.18 "ASBESTOS" means one of several minerals from the serpentine or amphibole groups that readily separate into long flexible fibers suitable for use as an incombustible, non-conducting, or chemically resistant material.

0.19 "ATTACHMENT 1" means a supplementary application to be completed by the holder of a VARIOUS LOCATION PERMIT (VLP) and submitted to the CONTROL OFFICER or his/her representative each time the Permittee changes the work location of equipment and/or other accessories authorized under the VLP.

0.20 "AUTHORITY TO CONSTRUCT CERTIFICATE" means that certificate issued, after review of a new or modified STATIONARY SOURCE, which constitutes approval to COMMENCE CONSTRUCTION or MODIFICATION of such source.

0.21 "BANKING" means procedures which allow sources to store or reserve EMISSION REDUCTION CREDITS in a legally protected manner for future use, sale or transfer subject to conditions set out in this Section 58.

0.22 "BASELINE" means the ACTUAL EMISSIONS of a source as determined by Sections 4 and 12.

0.23 "BASELINE CONCENTRATION" means that ambient concentration level which exists in the BASELINE area at the time of the applicable NON-MAJOR SOURCE BASELINE Date. A BASELINE CONCENTRATION is determined for each REGULATED AIR POLLUTANT for which a BASELINE date is established and shall include:

(a) The ACTUAL EMISSIONS representative of sources in existence on the applicable NON-MAJOR SOURCE BASELINE Date, except as provided below; and

(b) The ALLOWABLE EMISSIONS of MAJOR STATIONARY SOURCES which COMMENCED CONSTRUCTION before the MAJOR SOURCE BASELINE Date but were not in operation by the applicable NON-MAJOR SOURCE BASELINE Date.

(c) The following shall not be included in the BASELINE CONCENTRATION and will affect the applicable maximum allowable increase(s):

(1) ACTUAL EMISSIONS for any MAJOR STATIONARY SOURCE on which CONSTRUCTION COMMENCED after the MAJOR SOURCE BASELINE Date; and

(2) ACTUAL EMISSIONS increases and decreases at any STATIONARY SOURCE occurring after the NON-MAJOR STATIONARY SOURCE BASELINE Date.

0.24 "BEST AVAILABLE CONTROL TECHNOLOGY" means an EMISSIONS limitation (including a visible EMISSION standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Clean Air Act which would be emitted from any proposed STATIONARY SOURCE or MODIFICATION which the CONTROL OFFICER, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or MODIFICATION through application of production processes or available methods, systems, and techniques, including FUEL cleaning or treatment or innovative FUEL combustion techniques for control of such pollutant. In no event shall application of BEST AVAILABLE CONTROL TECHNOLOGY result in EMISSIONS of

any pollutant which would exceed the EMISSIONS allowed by any applicable standard under 40 CFR Parts 60 and 61. If the CONTROL OFFICER determines that technological or economic limitations on the application of measurement methodology to a particular EMISSIONS UNIT would make the imposition of an EMISSIONS standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of BEST AVAILABLE CONTROL TECHNOLOGY. Such standard shall, to the degree possible, set forth the EMISSIONS reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

0.25 "BEST MANAGEMENT PRACTICES" means dust CONTROL MEASURES that are based on each project soil type, project activity, and phasing as required in the Section 94 Handbook. These practices shall be included in each Dust Control Permit and Dust Mitigation Plan and are established to meet the goal of reducing particulate EMISSIONS from CONSTRUCTION sites. Additionally, some practices are designed to address the economic and environmental purposes of reducing the amount of water to be used for dust control.

0.26 "BRITISH THERMAL UNIT" means that quantity of heat required to raise the temperature of one pound of water 1 degree F.

0.27 "BUILDING VENT" means an opening of a building through which there is mechanically induced air flow for the purpose of exhausting air carrying PARTICULATE MATTER EMISSIONS.

0.28 "CHEMICAL PROCESS" means a manufacturing operation in which one or more changes in chemical composition, chemical properties, or physical properties are involved.

0.29 "CLEARING AND GRUBBING" means the removal of tree stumps, shrubs, trash, and dirt piles before excavation of a site.

0.30 "COMBINED TANK CAPACITY" means all GASOLINE storage tanks at the GASOLINE STATION.

0.31 "COMBUSTIBLE REFUSE" means any WASTE material that can be consumed by combustion.

0.32 "COMMENCE" means that the owner or operator has:

(a) Begun, or caused to begin, a program of actual on-site CONSTRUCTION of the source, to be completed within a reasonable time; or

(b) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual CONSTRUCTION of the source to be completed within a reasonable time.

0.33 "COMMERCIAL AND RESIDENTIAL CONSTRUCTION" means CONSTRUCTION of structures intended to be utilized solely as personal dwellings, including but not limited to single family homes, duplexes, fourplexes, apartments, condominiums, town houses; CONSTRUCTION of institutional structures, schools, libraries, churches, hospitals, parks, office structures; shopping malls; residential streets within a subdivision; improvements to existing curbed paved roads; parking lots, parking lot structures; and CONSTRUCTION of underground utilities for sanitary sewer, water, electricity, natural GAS and communication.

0.34 "CONFIDENTIAL INFORMATION" means information or records which:

(1) Relate to dollar amounts of production or sales;

(2) Relate to processes or production unique to the owner or operator; or

(3) If disclosed, would tend to affect adversely the competitive position of the owner or operator.

0.35 "CONSTRUCTION" means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or MODIFICATION of an EMISSIONS UNIT), which would result in a change in ACTUAL EMISSIONS.

0.36 "CONSTRUCTION ACTIVITY" means the following activities: COMMERCIAL AND RESIDENTIAL CONSTRUCTION, FLOOD CONTROL CONSTRUCTION, and HIGHWAY CONSTRUCTION as defined in Section 0.

0.37 "CONTROL MEASURE" means a technique, practice, or procedure used to prevent or minimize the generation, EMISSION, entrainment, suspension, and/or airborne transport of FUGITIVE DUST.

0.38 "CONTROL OFFICER" means the Chief Health Officer for the Clark County Board of Health or his designee.

0.39 "DESIGNATED REPRESENTATIVE" means a responsible PERSON or official authorized by the owner or operator of a unit to represent the owner or operator in matters pertaining to the holding, transfer, or disposition of allowances allocated to a unit, and the submission of and compliance with permits, permit applications, and compliance plans for the unit. For sources subject to the acid rain program under Title IV of the ACT, "DESIGNATED REPRESENTATIVE" shall have the meaning defined in 40 CFR Part 72.

0.40 "DESIGNATED TRAIL" means any trail designated by a public agency for use by equestrians, hikers, bicycles, or other non-motorized forms of travel.

0.41 "DIESEL FUEL" means low viscosity oil normally used in compression ignition engines.

0.42 "DISPATCHABLE PEAK SHAVING" means a program by which Peak Shaving operations will be scheduled and controlled by the serving public utility to those times essential to maintain a reliable, area-wide, supply source of electrical energy.

0.43 "DISTURBED SURFACE AREA" means a portion of the earth's surface (or material placed thereupon) which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed native condition, thereby increasing the potential for the EMISSION of FUGITIVE DUST.

0.44 "DRAFT PERMIT" means the version of a permit for which the CONTROL OFFICER offers public participation and AFFECTED STATE review.

0.45 "DUST PALLIATIVE" means hygroscopic material, non-toxic chemical stabilizer or other DUST PALLIATIVE material which is not prohibited for ground surface application by the federal Environmental Protection Agency (EPA) or the Nevada Department of Environmental Protection (NDEP) or any applicable law or regulation, as a treatment material for reducing FUGITIVE DUST EMISSIONS. Water, solutions of water and chemical surfactants, and foam are not DUST PALLIATIVES for the purpose of these Regulations.

0.46 "DUST SUPPRESSANT" means water, hygroscopic material, solution of water and chemical surfactants, foam, non-toxic chemical stabilizer or any other DUST PALLIATIVE which is not prohibited for ground surface application by the federal Environmental Protection Agency (EPA) or the Nevada Department of Environmental Protection (NDEP) or any applicable law or regulation, as a treatment material for reducing FUGITIVE DUST EMISSIONS.

0.47 "EASEMENT" means the grant to a PERSON a right of use of a property given by the property owner for a specific purpose, or a prescriptive right as determined by a court of law.

0.48 "EASEMENT HOLDER" means any PERSON who owns, leases, operates, controls, or supervises an EASEMENT.

0.49 "ELECTRIC UTILITY STEAM GENERATING UNIT" means any steam electric generating unit that is constructed for the purpose of supplying more than one third (1/3) of its potential electric output capacity and more than twenty-five (25) MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

0.50 "ELDORADO VALLEY" means the geographical area encompassed by HYDROGRAPHIC BASIN 167 and is approximated by the attached map.

0.51 "EMERGENCY" means a situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including Acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based EMISSION limitation under the permit, due to unavoidable increases in EMISSIONS attributable to the EMERGENCY. An EMERGENCY shall not include any noncompliance due to improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

0.52 "EMERGENCY STANDBY GENERATOR" means an internal combustion engine that powers an electric generator permanently installed on the users' property to provide electrical energy on an EMERGENCY and standby basis for life safety functions and general business functions during the loss of utility power and EMERGENCY situations. These functions include EMERGENCY lighting, ventilation and smoke control, elevators, exit lights, fire pumps, and other life safety functions as required by the Uniform Building Code and the Uniform Fire Code.

0.53 "EMERGENCY STANDBY DIESEL POWERED GENERATOR" means a diesel power electric generator permanently installed on the users' property to provide electrical energy on an EMERGENCY and standby basis for life safety functions and general business functions during the loss of utility power and EMERGENCY situations. These functions include EMERGENCY lighting, ventilation and smoke control, elevators, exit lights, fire pumps, and other life

safety functions as required by the Uniform Building Code and the Uniform Fire Code.

0.54 "EMISSION" or "EMIT" means the release or the passing into the atmosphere of a REGULATED AIR POLLUTANT.

0.55 "EMISSION REDUCTION CREDIT (ERC)" means a surplus EMISSION reduction unit that has been applied for and accepted by the CONTROL OFFICER in accordance with the provisions of Subsection 12.4, Section 52, or Section 58.

(a) A Subsection 12.4 EMISSION REDUCTION CREDIT shall be a real and measurable reduction in EMISSIONS below an established BASELINE. The unit of measure for a Subsection 12.4 ERC shall be tons per year.

(b) A Section 52 EMISSION REDUCTION CREDIT shall be a real, measurable, permanent, and enforceable reduction in EMISSIONS below an established BASELINE. The unit of measure for a Section 52 ERC is tons per year.

(c) A Section 58 EMISSION REDUCTION CREDIT shall be a real, surplus, permanent, quantifiable and FEDERALLY ENFORCEABLE reduction in EMISSIONS below an established BASELINE. The unit of measure for a Section 58 ERC is tons per year.

0.56 "EMISSIONS UNIT" means any part of a STATIONARY SOURCE that EMITS or has the POTENTIAL TO EMIT any REGULATED AIR POLLUTANT or any pollutant listed under Section 112(b) of the ACT.

(a) Examples of EMISSIONS UNITS include but are not limited to the following: any process which can be assigned to a Source Classification Code (SCC), such as crushers, screens, conveyer belt systems, storage silos, stockpiles, boilers, heaters, mining operation, combustion turbines, kilns, haul roads within a permitted facility, and stationary engines with rating of at least 35 h.p. or 26 kilowatts.

(b) Each of the following EMISSIONS UNITS shall be subject to a fee pursuant to Section 18:

	EMISSIONS UNIT	**Limitations**
1.	asphalt kettle or heated storage tank	
2.	combustion turbine	
3.	sand & gravel or hard rock crusher	

4.	EMERGENCY STANDBY GENERATOR	brake horsepower rating ≥ 500 hp or 373 kW
5.	FUEL BURNING EQUIPMENT (i.e. boilers)	max heat input aggregating ≥ 10 Mmbtu
6.	haul roads	
7.	GASOLINE storage tank	equipped with STAGE I and II VAPOR recovery equipment at any GASOLINE DISPENSING FACILITY
8.	kiln	
9.	mechanical screen	
10.	mining operation	
11.	PROCESS EQUIPMENT	
12.	STATIONARY INTERNAL COMBUSTION ENGINE	brake horsepower rating ≥ 35 hp, or 26 kW, except EMERGENCY STANDBY GENERATORS
13.	stationary tank, reservoir, or other container	> 40,000 gallons containing petroleum product with VAPOR pressure ≥ 1.5 psia @STP
14.	storage silo	

0.57 "EMISSIONS ALLOWABLE UNDER THE PERMIT" means a FEDERALLY ENFORCEABLE permit term or condition determined at issuance to be required by an APPLICABLE REQUIREMENT that establishes an EMISSIONS limit (including a work practice standard) or a FEDERALLY ENFORCEABLE EMISSIONS cap that the source has assumed to avoid an APPLICABLE REQUIREMENT to which the source would otherwise be subject.

0.58 "EPA OR ADMINISTRATOR" means the ADMINISTRATOR of the federal Environmental Protection Agency (EPA) or the ADMINISTRATOR's designee.

0.59 "ETHANOL" means an alcohol with the chemical formula CH_3CH_2OH. ETHANOL has been approved by EPA as an additive for unleaded GASOLINE for blends up to 10 percent by volume. Federal law allows a rebate from the federal GASOLINE sales tax, for GASOLINE containing a blend of 10 percent ETHANOL by volume. 100 grams of ETHANOL contains approximately 35 grams of combined oxygen.

0.60 "EXEMPT STATIONARY SOURCE" means a STATIONARY SOURCE with EMISSIONS, calculated without the application of AIR POLLUTION control technology or limits on the hours of operation, that are less than any of the following enumerated limits:

	Uncontrolled Emissions

Type of Air Pollutant	[tons per year]
PM_{10}	1.0
CO	2.0
VOC	2.0
NO_x	2.0
SO_2	1.0
Lead (Pb)	0.3
HAZARDOUS AIR POLLUTANT (HAP)	1.0
TOXIC CHEMICAL SUBSTANCE (TCS)	1.0

0.61 "EXISTING EMISSIONS UNIT" means, unless otherwise specified in these Regulations, an EMISSIONS UNIT that COMMENCED CONSTRUCTION or MODIFICATION prior to August 25, 1971.

0.62 "EXISTING STATIONARY SOURCE" means, unless otherwise specified in these Regulations, any STATIONARY SOURCE that COMMENCED CONSTRUCTION or MODIFICATION prior to August 25, 1971.

0.63 "FEDERALLY ENFORCEABLE" means all limitations and conditions which are enforceable by the EPA, including those requirements developed pursuant to 40 CFR parts 60 and 61, requirements within any applicable STATE implementation plan, any permit requirements established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51, subpart I, including OPERATING PERMITS issued under Title 40 CFR, Part 70.

0.64 "FINAL PERMIT" means the version of a PART 70 PERMIT issued by the CONTROL OFFICER that has completed all review procedures required by Subsections 19.5 and 19.6.

0.65 "FLOOD CONTROL CONSTRUCTION" means CONSTRUCTION of flood detention basins, flood diversion channels, box culverts, and excavations intended to capture or retain water.

0.66 "FREEBOARD RATIO" means the ratio determined by dividing the freeboard height (area above the cooling coils to the top of the tank) by the smaller of the length or width of the degreaser.

0.67 "FUEL" means any form of combustible matter (solid, liquid VAPOR, or GAS), excluding COMBUSTIBLE REFUSE.

0.68 "FUEL BURNING EQUIPMENT" means any device used for the burning of FUEL for the primary purpose of producing heat or power by indirect heat transfer in which the products of combustion do not come into direct contact with any other materials.

0.69 "FUEL OIL" means a liquid or liquefiable petroleum product normally produced, manufactured, used, or sold for the purpose of creating useful heat.

0.70 "FUGITIVE DUST" means PARTICULATE MATTER, which is not collected by a capture system, which is entrained in the AMBIENT AIR and which is caused from human and/or natural activities, such as but not limited to, movement of soil, vehicles, equipment, blasting, and wind. For the purpose of these Regulations, FUGITIVE DUST does not include PARTICULATE MATTER emitted directly from the exhaust of MOTOR VEHICLES and other internal combustion engines, from portable brazing, soldering, or welding equipment, and from pile drivers, and does not include EMISSIONS from process and combustion sources that are subject to other Sections of these Regulations.

0.71 "FUGITIVE EMISSIONS" means those EMISSIONS which could not reasonably pass through a STACK, chimney, vent, or other functionally equivalent opening.

0.72 "FUGITIVE GAS" means gaseous matter emitted from any source other than a vent or STACK.

0.73 "GARBAGE" means putrescible animal or vegetable refuse.

0.74 "GAS" means matter which has neither independent shape nor volume and tends to expand indefinitely.

0.75 "GASOLINE" means any petroleum distillate having a Reid VAPOR pressure of 4 pounds per square inch or greater.

0.76 "GASOLINE DISPENSING FACILITY" means a facility, except bulk distribution terminal, that is capable of receiving, storing, and dispensing to a MOTOR VEHICLE one or more grades of GASOLINE.

0.77 "GASOLINE STATION" means a place capable of receiving, storing, and dispensing one or more grades of GASOLINE for use in MOTOR VEHICLES.

0.78 "HAZARDOUS AIR POLLUTANT" means any air pollutant listed pursuant to Section 112(b) of the ACT including the following list:

CAS Number	Chemical Name
75070	Acetaldehyde
60355	Acetamide
75058	Acetonitrile
98862	Acetophenone

53963	2-Acetylaminofluorene
107028	Acrolein
79061	Acrylamide
79107	Acrylic Acid
107131	Acrylonitrile
107051	Allyl Chloride
92671	4-Aminobiphenyl
62533	Aniline
90040	o-Anisidine
1332214	ASBESTOS
71432	Benzene (including Benzene from GASOLINE)
92875	Benzidine
98077	Benzotrichloride
100447	Benzyl Chloride
92524	Biphenyl
117817	Bis(2-ethylhexyl)phthalate(DEHP)
542881	Bis(chloromethyl)ether
75252	Bromoform
106990	1,3-Butadiene
156627	Calcium Cyanamide
105602	Caprolactam
133062	Captan
63252	Carbaryl
75150	Carbon Disulfide
56235	Carbon Tetrachloride
463581	Carbonyl Sulfide
CAS Number	**Chemical Name**
120809	Catechol
133904	Chloramben
57749	Chlordane
7782505	Chlorine
79118	Chloroacetic Acid
532274	2-Chloroacetophenone
108907	Chlorobenzene
510156	Chlorobenzilate
67663	Chloroform
107302	Chloromethyl Methyl Ether
126998	Chloroprene
1319773	Cresols/Cresylic Acid (isomers and mixture)
95487	o-Cresol
108394	m-Cresol
106445	p-Cresol
98828	Cumene
94757	2,4-D, Salts and Esters

3547044	DDE
334883	Diazomethane
132649	Dibenzofurans
96128	1,2-Dibromo-3-Chloropropane
84742	Dibutylphthalate
106467	1,4-Dichlorobenzene(p)
91941	3,3-Dichlorobenzidene
111444	Dichloroethyl Ether (Bis(2-chloroethyl)ether)
542756	1,3-Dichloropropene
62737	Dichlorvos
111422	Diethanolamine
121697	N,N-Diethyl Aniline (N,N-Dimethylaniline)
64675	Diethyl Sulfate
119904	3,3-Dimethoxybenzidine
60117	Dimethyl Aminoazobenzene
119937	3,3-Dimethyl Benzidine
79447	Dimethyl Carbamoyl Chloride
68122	Dimethyl Formamide
57147	1,1-Dimethyl Hydrazine
131113	Dimethyl Phthalate
77781	Dimethyl Sulfate
534521	4,6-Dinitro-o-Cresol, and Salts
51285	2,4-Dinitrophenol
CAS Number	**Chemical Name**
121142	2,4-Dinitrotoluene
123911	1,4-Dioxane (1,4-Diethyleneoxide)
122667	1,2-Diphenylhydrazine
106898	Epichlorohydrin (1-Chloro-2,3-Epoxypropane)
106887	1,2-Epoxybutane
140885	Ethyl Acrylate
100414	Ethyl Benzene
51796	Ethyl Carbamate (Urethane)
75003	Ethyl Chloride (Chloroethane)
106934	Ethylene Dibromide (Dibromoethane)
107062	Ethylene Dichloride (1,2-Dichloroethane)
107211	Ethylene Glycol
151564	Ethylene Imine (Aziridine)
75218	Ethylene Oxide
96457	Ethylene Thiourea
75343	Ethylidene Dichloride (1,1-Dichloroethane)
50000	Formaldehyde
76448	Heptachlor
118741	Hexachlorobenzene
87683	Hexachlorobutadiene

77474	Hexachlorocyclopentadiene
67721	Hexachloroethane
822060	Hexamethylene-1,6-Diisocyanate
680319	Hexamethylphosphoramide
110543	Hexane
302012	Hydrazine
7647010	Hydrochloric Acid
7664393	Hydrogen Fluoride (Hydrofluoric Acid)
7783064	Hydrogen Sulfide
123319	Hydroquinone
78591	Isophorone
58899	Lindane (all isomers)
108316	Maleic Anhydride
67561	Methanol
72435	Methoxychlor
74839	Methyl Bromide (Bromomethane)
74873	Methyl Chloride (Chloromethane)
71556	Methyl Chloroform (1,1,1-Trichloroethane)
78933	Methyl Ethyl Ketone (2-Butanone)
60344	Methyl Hydrazine
CAS Number	**Chemical Name**
74884	Methyl Lodide (Lodomethane)
108101	Methyl Isobutyl Ketone (Hexone)
624839	Methyl Isocyanate
80626	Methyl Methacrylate
1634044	Methyl Tert Butyl Ether
101144	4,4-Methylene Bis(2-Chloroaniline)
75092	Methylene Chloride (Dichloromethane)
101688	Methylene Diphenyl Diisocyanate (MDI)
101779	4,4-Methylenedianiline
91203	Naphthalene
98953	Nitrobenzene
92933	4-Nitrobiphenyl
100027	4-Nitrophenol
79469	2-Nitropropane
684935	N-Nitroso-N-Methylurea
62759	N-Nitrosodimethylamine
59892	N-Nitrosomorpholine
56382	Parathion
82688	Pentachloronitrobenzene (Quintobenzene)
87865	Pentachlorophenol
108952	Phenol
106503	p-Phenylenediamine
75445	Phosgene

7803512	Phosphine
7723140	Phosphorus
85449	Phthalic Anhydride
1336363	Polychlorinated Biphenyls (Aroclors)
1120714	1,3-Propane Sultone
57578	Beta-Propiolactone
123386	Propionaldehyde
114261	Propoxur (Baygon)
78875	Propylene Dichloride (1,2-Dichloropropane)
75569	Propylene Oxide
75558	1,2-Propylenimine (2-Methyl Aziridine)
91225	Quinoline
106514	Quinone
100425	Styrene
96093	Styrene Oxide
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin
79345	1,1,2,2-Tetrachloroethane
CAS Number	**Chemical Name**
127184	Tetrachloroethylene (Perchloroethylene)
7550450	Titanium Tetrachloride
108883	Toluene
95807	2,4-Toluene Diamine
584849	2,4-Toluene Diisocyanate
95534	o-Toluidine
8001352	Toxaphene (Chlorinated Camphene)
120821	1,2,4-Trichlorobenzene
79005	1,1,2-Trichloroethane
79016	Trichloroethylene
95954	2,4,5-Trichlorophenol
88062	2,4,6-Trichlorophenol
121448	Triethylamine
1582098	Trifluralin
540841	2,2,4-Trimethylpentane
108054	Vinyl Acetate
593602	Vinyl Bromide
75014	Vinyl Chloride
75354	Vinylidene Chloride (1,1-Dichloroethylene)
1330207	Xylenes (isomers and mixture)
95476	o-Xylenes
108383	m-Xylenes
106423	p-Xylenes
0	Antimony Compounds
0	Arsenic Compounds (inorganic including Arsine)
0	Beryllium Compounds

0	Cadmium Compounds
0	Chromium Compounds
0	Cobalt Compounds
0	Coke Oven Emissions
0	Cyanide Compounds
0	Glycol Ethers
0	Lead Compounds
0	Manganese Compounds
0	Mercury Compounds
0	Fine Mineral Fibers
0	Nickel Compounds
0	Polycylic Organic Matter
0	Radionuclides (including Radon)
0	Selenium Compounds

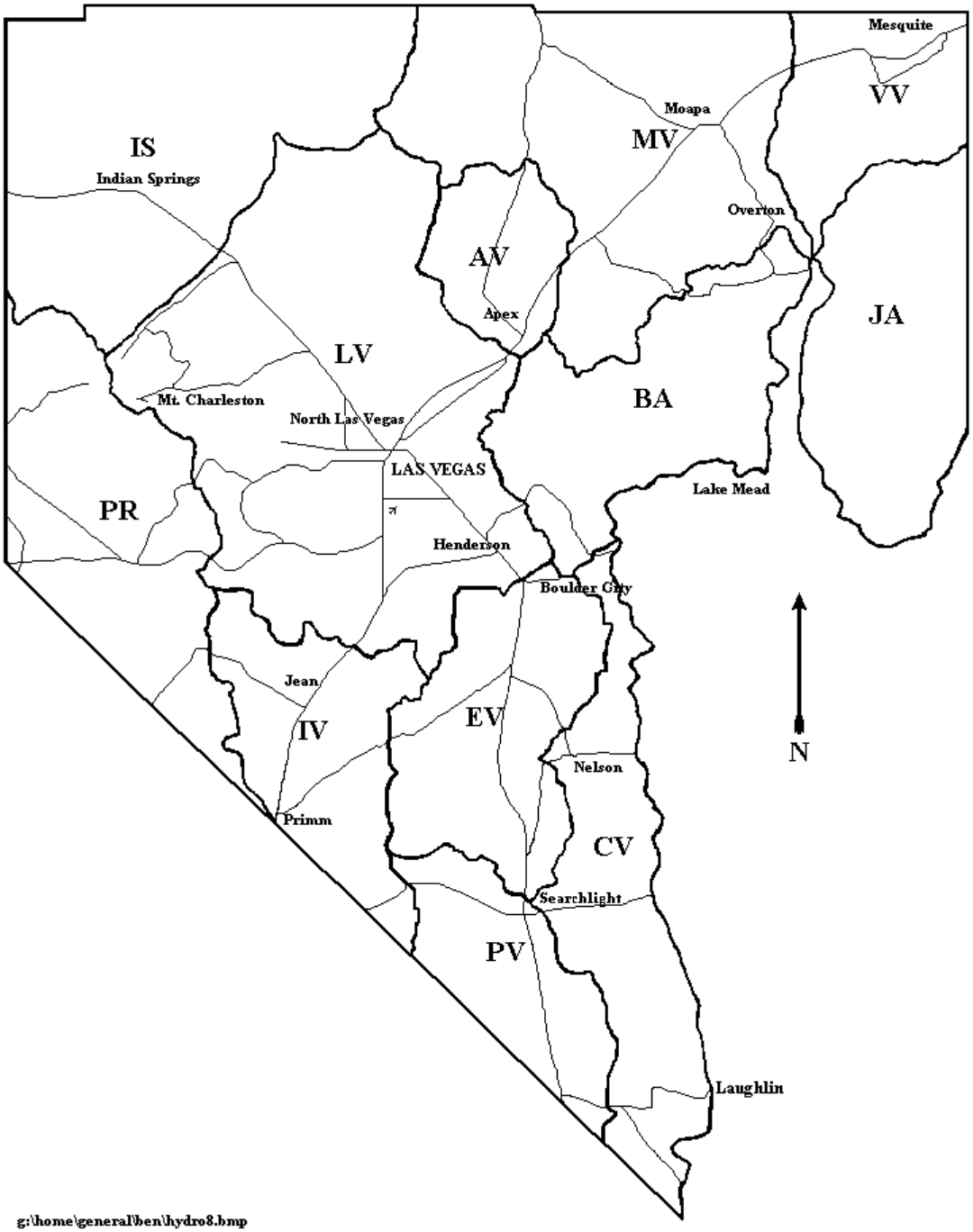
0.79 "HEALTH DISTRICT" means the Clark County HEALTH DISTRICT.

0.80 "HEARING BOARD" means seven (7) members appointed by the Board of Health to perform the function set forth in the Nevada Revised Statutes and these Regulations.

0.81 "HEARING OFFICER" means an individual(s) appointed or contracted by the Board of Health to perform the function set forth in the Nevada Revised Statutes and these Regulations.

0.82 "HIGHLY VOLATILE SOLVENT" means a solvent whose volatility is greater than 0.6 PSI at 100^{o} F.

0.83 "HYDROGRAPHIC BASIN AREAS" means the areas within Clark County, Nevada as defined in the STATE OF NEVADA - Hydrographic Areas Map, prepared by the Division of Water Resources, Rev. 7/69. For quick reference the following map is provided:


Mesquite
VV
Moapa
MV
IS
Indian Springs
Overton
AV
JA
Apex
LV
BA
Mt. Charleston
North Las Vegas
LAS VEGAS
Lake Mead
PR
Henderson
Boulder City
N
Jean
IV
EV
Nelson
Primm
CV
Searchlight
PV
Laughlin
g:\home\general\ben\hydro8.bmp

0.84 "HIGHWAY CONSTRUCTION" means CONSTRUCTION of roadway systems including; arterials, expressways, interstates, tunnels, overpasses, bridges, interchanges and airport runway improvements but not residential streets within a subdivision.

0.85 "INCINERATOR" means a combustion device specifically designed for the destruction, by high temperature burning, of COMBUSTIBLE REFUSE and from which the solid residues contain little or no combustible material.

0.86 "LARGE APPLIANCES" means doors, cases, lids, panels and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners and other similar products.

0.87 "LAS VEGAS VALLEY" means that geographical area which coincides with the boundaries of the Hydrographic Area 212 as reported in the document "Water Resources - Information Series - Report 6" issued by the Nevada STATE Engineer's Office in July 1969. An approximate map is attached.

0.88 "LEAK FREE" means a liquid leak of less than four drops per minute.

0.89 "LOW ORGANIC SOLVENT COATING" means coating which contain less organic solvents than conventional coatings used by industry. Low organic coatings include water-borne, higher solids, electrodeposition and powders.

0.90 "LOWEST ACHIEVABLE EMISSION RATE" means for any source, the more stringent rate of EMISSIONS based on the following:

(a) The most stringent EMISSIONS limitation which is contained in the STATE Implementation Plan for such class or category of STATIONARY SOURCE, unless the owner or operator of the proposed STATIONARY SOURCE demonstrates that such limitations are not achievable; or

(b) The most stringent EMISSIONS limitation which is achieved in practice by such class or category of STATIONARY SOURCES. This limitation, when applied to a MODIFICATION, means the lowest achievable EMISSIONS rate for the new or MODIFIED EMISSIONS UNITS within the STATIONARY SOURCE. In no event shall the application of the term permit a proposed new or MODIFIED STATIONARY SOURCE to EMIT any pollutant in excess of the amount allowable under an applicable new source standard of performance.

0.91 "MAJOR MODIFICATION" means

(a) a MODIFICATION which results in a Net EMISSIONS Increase for any REGULATED AIR POLLUTANT at any MAJOR STATIONARY SOURCE equal to or exceeding the following amounts:

Air Pollutant	Emission Rate [tons per year]
PM_{10}	15
CO	70
VOC	40
NO_x	40
SO_2	40
Lead	0.6
HAZARDOUS AIR POLLUTANT (HAP)	10
ASBESTOS	0.007
Beryllium	0.0004
Mercury	0.1
Vinyl Chloride	1.0
Fluorides	3.0
Sulfuric Acid Mist	7.0
Hydrogen Sulfide (H_2S)	10
Total Reduced Sulfur (including H_2S)	10
Reduced Sulfur Compounds	10
Municipal WASTE Combustor Organics	0.0000035
Municipal WASTE Combustor Metals	15
Municipal WASTE Combustor Gasses	40
TOXIC CHEMICAL SUBSTANCE (TCS)	1.0

(b) or, at such time that a particular source or MODIFICATION becomes a MAJOR STATIONARY SOURCE or MAJOR MODIFICATION solely by virtue of a relaxation in any enforcement limitation which was established after August 7, 1980, on the capacity of the source or MODIFICATION otherwise to EMIT a pollutant, such as a restriction on hours of operation, then the requirements of the AQD Regulations shall apply to the source or MODIFICATION as though CONSTRUCTION had not yet COMMENCED on the source or MODIFICATION.

0.92 "MAJOR PART 70 SOURCE" means any STATIONARY SOURCE or any group of STATIONARY SOURCES that are located on one or more contiguous or adjacent properties, and are under common control of the same PERSON (or PERSONS under common control) that EMITS or has the potential to EMIT:

(a) Any REGULATED AIR POLLUTANT equal to or exceeding the following:

Air Pollutant	*Non-Attainment or Management Area Emission Rate (Controlled) [tons per year]*	*PSD Area Emission Rate (Controlled) [tons per year]*
PM_{10}	70	100
CO	70	100
NO_x	50	100
VOC	50	100
SO_2	not applicable	100
Lead	not applicable	0.6

(b) Or, except for radionuclides, ten (10) tons per year of any HAZARDOUS AIR POLLUTANT listed pursuant to section 112(b) of the Clean Air Act or any combination of HAZARDOUS AIR POLLUTANTS exceeding twenty-five (25) tons per year or such lesser quantities as may be determined by the EPA. For radionuclides, "major source" shall have the meaning specified by the ADMINISTRATOR by rule.

For STATIONARY SOURCES subject to 40 CFR part 60.670 (Subpart OOO-Standards of Performance for NON-METALLIC MINERAL Processing Plants), effective July 1, 1997, FUGITIVE EMISSIONS, not considered to be a HAZARDOUS AIR POLLUTANT, shall be included for purposes of determining whether a source is major.

For all other STATIONARY SOURCE categories, FUGITIVE EMISSIONS shall be included for the purposes of determining whether a source is major.

0.93 "MAJOR SOURCE BASELINE DATE" means the date after which ACTUAL EMISSIONS associated with CONSTRUCTION (i.e., physical changes or changes in the method of operation) at a MAJOR STATIONARY SOURCE affect the available Prevention of Significant Deterioration (PSD) Increment for a specific area (as defined in subsection 12.2). The MAJOR SOURCE BASELINE DATE is:

Pollutant	**Date**
PM_{10}	January 6, 1975
SO_2	January 6, 1975
NO_2	February 8, 1988

0.94 "MAJOR STATIONARY SOURCE" - see "STATIONARY SOURCE" definition

0.95 "MALFUNCTION" means an UPSET/BREAKDOWN which meets the guidelines specified in Section 25. The resulting excess EMISSIONS may not be a violation if certain conditions are met.

0.96 "MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY [MACT]" with respect to the following source types means:

(a) For EXISTING STATIONARY SOURCES, the EMISSION limitation reflecting the maximum degree of reduction in EMISSIONS of HAZARDOUS AIR POLLUTANTS (including a prohibition on such EMISSIONS, where achievable) that the CONTROL OFFICER, taking into consideration the cost of achieving such EMISSION reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by sources in the category or subcategory to which such EMISSION standard applies. This limitation shall not be less stringent than the MACT Floor;

(b) For new STATIONARY SOURCES, the EMISSION limitation which is not less stringent than the EMISSION limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in EMISSIONS of HAZARDOUS AIR POLLUTANTS (including a prohibition on such EMISSIONS, where achievable) that the ADMINISTRATOR, taking into consideration the cost of achieving such EMISSION reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by sources in the category or subcategory to which such EMISSION standard applies.

0.97 "MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY [MACT] FLOOR" with respect to the number of sources in a category or subcategory means:

(a) For categories or subcategories of STATIONARY SOURCES with thirty (30) or more sources, the average EMISSION limitation achieved by the best performing twelve (12) percent of the existing sources in the United States (for which the ADMINISTRATOR has EMISSIONS information), excluding those sources that have, within eighteen (18) months before the EMISSION standard is proposed or within thirty (30) months before such standard is promulgated, whichever is later, first achieved a level of EMISSION rate or EMISSION reduction which complies, or would comply if the source is not subject to such standard, with the LOWEST ACHIEVABLE EMISSION RATE [LAER], applicable to the source category and prevailing at the time, in the category or subcategory;

(b) For categories or subcategories of STATIONARY SOURCES with fewer than thirty (30) sources, the average EMISSION limitation achieved by the best performing five (5) sources in the United States (for which the ADMINISTRATOR has or could reasonably obtain EMISSIONS information), in the category or subcategory.

0.98 "METHYL TERTIARY BUTYL ETHER" means an ether with the chemical formula $(CH_3)_3C(-OCH_3)$. MTBE has been approved by EPA as an additive for unleaded GASOLINE for blends up to 15 percent by volume. 100 grams of MTBE contains approximately 19 grams of combined oxygen.

0.99 "MODIFICATION" means any physical change in or change in the method of operation of an EXISTING STATIONARY SOURCE that would result in a NET EMISSIONS INCREASE for any REGULATED AIR POLLUTANT at such STATIONARY SOURCE, or would result in the EMISSION of any REGULATED AIR POLLUTANT into the atmosphere not previously emitted.

(a) A physical change or change in the method of operation shall not include:

(1) Routine maintenance, repair and replacement, except RECONSTRUCTION.

(2) The use of an alternative FUEL or raw material by reason of an order in effect under Sections 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (15 U.S.C.A. 792 or any superseding legislation), or by reason of a natural GAS curtailment plan in effect pursuant to the Federal Power Act (U.S.C. Title 16, Chapter 12), or by reason of any other forced curtailment of lack of supply of natural GAS if such STATIONARY SOURCE can furnish to the CONTROL OFFICER a certified copy of the finding of a STATE or federal governmental body having jurisdiction over such source that attests to the existence of a force curtailment or lack of supply of natural GAS.

(3) The use of an alternative FUEL by reason of an order or rule under Section 125 of the ACT.

(4) Use of an alternative FUEL at a steam-generating unit to the extent that the FUEL is generated from municipal solid WASTE.

(5) Use of an alternative FUEL or raw material by the STATIONARY SOURCE which:

(i) The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any FEDERALLY ENFORCEABLE permit condition which was established after January 6, 1975 pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR subpart I or 40 CFR 51.166; or,

(ii) The source is approved to use under any permit issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166.

(6) An increase in the hours of operation or in the production rate, unless such change would be prohibited under any FEDERALLY ENFORCEABLE permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21, or under regulations approved pursuant to 40 CFR subpart I or 40 CFR 51.166.

(7) Any change in ownership at a STATIONARY SOURCE.

0.100 "MODIFIED EMISSIONS UNIT" means any EMISSIONS UNIT which undergoes, as part of a MODIFICATION at a STATIONARY SOURCE, a physical change or change in method of operation that would result in an increase in EMISSIONS from such EMISSIONS UNIT above the DE MINIMUS THRESHOLD.

0.101 "MOTOCROSS RACE COURSE" means a closed loop course established on improved or unimproved property upon which the actual track may be dirt, gravel, pavements or other surface encompassing an area of less than 50 acres.

0.102 "MOTOR VEHICLE" means every device in, upon or by which any PERSON or property is, or may be, transported or drawn upon a road or highway, except devices moved by human power or used exclusively upon stationary rails.

0.103 "MTBE" means METHYL TERTIARY BUTYL ETHER.

0.104 "MULTIPLE CHAMBER INCINERATOR" means any article, machine, equipment, contrivance, structure or part of a structure used to dispose of COMBUSTIBLE REFUSE by burning, consisting of three or more refractory-lined combustion furnaces in series, physically separated by refractory walls, interconnected by GAS passage ports or ducts, and employing adequate design parameters necessary for maximum combustion of the material to be burned.

0.105 "NATURAL COVER" means any vegetation which exists on the property.

0.106 "NET EMISSIONS INCREASE"

(a) "NET EMISSIONS INCREASE" means the amount by which the sum of the following exceeds zero:

(1) Any increase in ACTUAL EMISSIONS from a particular physical change or change in method of operation at a STATIONARY SOURCE; and

(2) Any other increases and decreases in ACTUAL EMISSIONS at a source that are contemporaneous with the particular change and are otherwise creditable.

(b) An increase or decrease in ACTUAL EMISSIONS is contemporaneous with the increase from the particular change only if it occurs between:

(1) The date five years before CONSTRUCTION on the particular change COMMENCES; and

(2) The date that the increase or decrease from the particular change occurs.

(c) An increase or decrease in ACTUAL EMISSIONS is creditable only if the ADMINISTRATOR has not relied on it issuing a permit for the source under this section, which permit is in effect when the increase in ACTUAL EMISSIONS from the particular change occurs.

(d) An increase or decrease in ACTUAL EMISSIONS of sulfur dioxide, PM_{10}, or nitrogen oxides which occurs before the applicable minor source BASELINE Date is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available.

(e) An increase in ACTUAL EMISSIONS is creditable only to the extent that the new level of ACTUAL EMISSIONS exceeds the old level.

(f) A decrease in ACTUAL EMISSIONS is creditable only to the extent that:

(1) The old level of ACTUAL EMISSIONS or the old level of ALLOWABLE EMISSIONS, whichever is lower, exceeds the new level of ACTUAL EMISSIONS;

(2) It is FEDERALLY ENFORCEABLE at and after the time that actual CONSTRUCTION on the particular change begins; and

(3) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.

(g) An increase that results from a physical change at a source occurs when the EMISSIONS UNIT on which CONSTRUCTION occurred becomes operational and begins to EMIT a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period not to exceed 180 days.

(h) The following examples are provided on how to calculate a NET EMISSIONS INCREASE [NEI]:

Example 1

Given Information:
Increase in Production MODIFICATION -No change in Process
Source's existing POTENTIAL TO EMIT [PTE]: 60 tons/year
Source's new POTENTIAL TO EMIT: 80 tons/year
Source's existing ACTUAL EMISSIONS [AE]:50 tons/year

NEI = [new PTE] - [existing AE]
NEI = 80 - 50
NEI = 30 tons per year

◆In the situation of identical process with an increase in production MODIFICATION, the existing ACTUAL EMISSIONS and the new POTENTIAL TO EMIT must be calculated using the same EMISSION factors. The existing ACTUAL EMISSIONS are based on actual production over the appropriate period prior to application submission.

Example 2

Given Information:
New Process MODIFICATION
Source's existing POTENTIAL TO EMIT [PTE]: 60 tons/year
Source's new POTENTIAL TO EMIT: 65 tons/year
Source's existing ACTUAL EMISSIONS [AE]:50 tons/year

NEI = [new PTE] - [existing AE]
NEI = 65 - 50
NEI = 15 tons per year

◆In the situation of new process MODIFICATION, the existing ACTUAL EMISSIONS and the new POTENTIAL TO EMIT must be calculated using the most recently updated EMISSION factors. The existing ACTUAL EMISSIONS are based on actual production over the appropriate period prior to application submission.

0.107 "NON-MAJOR SOURCE BASELINE DATE" means the earliest date after the TRIGGER DATE on which a MAJOR STATIONARY SOURCE or MAJOR MODIFICATION submits a complete Prevention of Significant Deterioration (PSD) permit application to the CONTROL OFFICER for a specific area (as defined in subsection 12.2).

0.108 "NON-METALLIC MINERAL" means any of the following minerals or any mixture of which more than fifty percent (50%) by weight is any of the following minerals:

(a) Crushed and Broken Stone, including Limestone, Dolomite, and Sandstone

(b) Sand and Gravel

(c) Clay

(d) Rock Salt

(e) Gypsum

(f) Sodium Compounds

0.109 "NON-METALLIC MINERAL PROCESSING PLANT" means any combination of equipment that is used to batch, screen, convey, crush, grind, or treat any NON-METALLIC MINERAL.

0.110 "NON-ROAD EASEMENT" means an easement not utilized by the EASEMENT HOLDER, or others with the permission of the EASEMENT HOLDER, for travel by MOTOR VEHICLE more often than 12 times within any 12 month period.

0.111 "NORMAL FARM CULTURAL PRACTICE" means all activities by the owner, lessee, agent, independent contractor, and/or supplier conducted on any facility for the production of crops and/or nursery plants. Disturbances of the field surface caused by turning under stalks, tilling, leveling, planting, fertilizing, or harvesting are included in this definition.

0.112 "NUISANCE" means anything that is injurious to health, offensive to the senses, or an obstruction to the free use of property, so as to interfere with the reasonable or comfortable enjoyment of life or property.

0.113 "ODOR" means those qualities of matter that make it perceptible to the olfactory senses of man.

0.114 "OFF-ROAD VEHICLE" means any self-propelled conveyance specifically designed for off-road use, including but not limited to, off-road or all-terrain equipment, trucks, cars, motorcycles, motorbikes, or motor buggies.

0.115 "OFFSET 'DE MINIMIS' THRESHOLD" means the amount of POTENTIAL TO EMIT EMISSIONS (permitted after the offset applicability date in the non-attainment area or management area) for each REGULATED AIR POLLUTANT that exceeds the following levels which trigger the requirement to offset the total amount of such POTENTIAL TO EMIT at the specified offset ratio, rounded to the nearest tenth of a ton:

Type of Air Pollutant	**Potential to Emit Emissions** [tons per year]
PM_{10}	1.0
CO	1.0
VOC	6.0
NO_x	6.0

For any STATIONARY SOURCE, all increases in the POTENTIAL TO EMIT after the offset applicability date in the non-attainment area or management area shall be accumulated to determine the offset amount.

0.116 "OPACITY" means the degree to which EMISSIONS reduce the transmission of light and obscure the view of an object in the background and is measured in terms of percent of obscuration.

0.117 "OPEN AREAS AND VACANT LOTS" means any of the following described in Subsections (a) through (e) below. For the purpose of this Regulation, vacant portions of residential or commercial lots that are immediately adjacent and owned and/or operated by the same individual or entity are considered one vacant OPEN AREA or VACANT LOT.

(a) An unsubdivided or undeveloped tract of land.

(b) A subdivided lot, which contains no approved or permitted buildings or structures of a temporary or permanent nature.

(c) An undeveloped or partially developed lot.

(d) NON-ROAD EASEMENTS.

(e) Unpaved parts of controlled access freeway right-of-ways, except those portions subject to Section 93 requirements.

0.118 "OPEN FIRE" means any fire wherein the products of combustion are emitted into the open air and are not directed thereto through a STACK or chimney.

0.119 "OPERATING PERMIT" means a document issued and signed by the CONTROL OFFICER authorizing, with conditions, the operation of a STATIONARY SOURCE of any REGULATED AIR POLLUTANT.

0.120 "OWNER AND/OR OPERATOR" means for the purposes of Sections 90 through 94, any PERSON who owns, leases, operates, maintains, controls, or supervises a FUGITIVE DUST source subject to the requirements of these Regulations.

0.121 "OXYGENATED GASOLINE" means GASOLINE blended with a component or components containing Oxygen, generally an alcohol or an ether.

0.122 "PART 70 PERMIT" means any permit or group of permits covering a PART 70 SOURCE that is issued, renewed, amended, or revised pursuant to Section 19.

0.123 "PART 70 PROGRAM" means a program approved by the EPA under Title 40 CFR, Part 70.

0.124 "PART 70 SOURCE" means any source subject to the permitting requirements of Title 40 CFR, Part 70, or any source subject to federal performance Standards including the following list:

(1) Any **Industrial Steam Generating Unit** COMMENCING CONSTRUCTION, MODIFICATION or RECONSTRUCTION after June 19, 1984 that has a heat input capacity exceeding 100 million Btu/hour [40 CFR §60 Subpart Db].

(2) Any **Small Industrial Steam Generating Unit** COMMENCING CONSTRUCTION, MODIFICATION or RECONSTRUCTION after June 9, 1989 that has a heat input capacity exceeding 10 million Btu/hour but less than or equal to 100 million Btu/hour [40 CFR §60 Subpart Dc].

(3) Any **INCINERATOR** COMMENCING CONSTRUCTION or MODIFICATION after August 17, 1971 with a charging rate exceeding 50 tons per day [40 CFR §60 Subpart E].

(4) Any **Portland Cement Plant** COMMENCING CONSTRUCTION or MODIFICATION after August 17, 1971 [40 CFR §60 Subpart F].

(5) Any **Hot Mix Asphalt Facility** COMMENCING CONSTRUCTION or MODIFICATION after June 11, 1973 [40 CFR §60 Subpart I].

(6) Any **Volatile Organic Liquid Storage Vessel** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after July 23, 1984 with a storage capacity exceeding 10,568 gallons [40 CFR §60 Subpart Kb].

(7) Any **Secondary Lead Smelter** COMMENCING CONSTRUCTION or MODIFICATION after June 11, 1973 that has a pot furnace with a charging capacity exceeding 550 pounds [40 CFR §60 Subpart L].

(8) Any **Sewage Treatment Plant** that combusts WASTES containing more than 10 percent sewage sludge (dry basis) or each INCINERATOR that charges more than 1 ton of sewage sludge (dry basis) per day that COMMENCED CONSTRUCTION or MODIFICATION after June 11, 1973 [40 CFR §60 Subpart O].

(9) Any **Primary Copper Smelter** COMMENCING CONSTRUCTION or MODIFICATION after October 16, 1974 [40 CFR §60 Subpart P].

(10) Any **Primary Zinc Smelter** COMMENCING CONSTRUCTION or MODIFICATION after October 16, 1974 [40 CFR §60 Subpart Q].

(11) Any **Primary Lead Smelter** COMMENCING CONSTRUCTION or MODIFICATION after October 16, 1974 [40 CFR §60 Subpart R].

(12) Any **Coal Preparation Plant** COMMENCING CONSTRUCTION or MODIFICATION after October 24, 1974 that processes more than 200 tons per day [40 CFR §60 Subpart Y].

(13) Any **Grain Elevator** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after August 3, 1978 with a storage capacity exceeding 2.5 million U.S. bushels [40 CFR §60 Subpart DD].

(14) Any **Metal Furniture Surface Coating Facility** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after November

28, 1980 that uses over 1015 gallons of coating (as applied) per year [40 CFR §60 Subpart EE].

(15) Any **Stationary GAS Turbine** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after October 3, 1977 with a heat input at peak load exceeding 10.1 million Btu/hour [40 CFR §60 Subpart GG].

(16) Any **Lime Manufacturing Plant** COMMENCING CONSTRUCTION or MODIFICATION after May 3, 1977 [40 CFR §60 Subpart HH].

(17) Any **Lead-Acid Battery Manufacturing Plant** COMMENCING CONSTRUCTION or MODIFICATION after January 14, 1980 that produces or has the design capacity to produce in 24 hours a quantity of batteries that contain an amount of lead exceeding 6.5 tons [40 CFR §60 Subpart KK].

(18) Any **Metallic Mineral Processing Plant** COMMENCING CONSTRUCTION or MODIFICATION after August 24, 1982 [40 CFR §60 Subpart LL].

(19) Any **Automobile or Light Truck Assembly Plant Utilizing Surface Coating Operations** that COMMENCED CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after October 5, 1979 [40 CFR §60 Subpart MM].

(20) Any **Phosphate Rock Plant** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after September 21, 1979 that has a maximum plant production capacity exceeding 4 tons per hour [40 CFR §60 Subpart NN].

(21) Any **Graphic Arts Facility Utilizing Publication Rotogravure Printing** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after October 28, 1980 [40 CFR §60 Subpart QQ].

(22) Any **Facility Manufacturing Pressure Sensitive Tape and Label Materials** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after December 30, 1980 that utilizes a VOC input exceeding 49.6 tons per year [40 CFR §60 Subpart RR].

(23) Any **Facility that performs Industrial Surface Coating of LARGE APPLIANCES** that COMMENCED CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after December 24, 1980 [40 CFR §60 Subpart SS].

(24) Any **Facility that performs Metal Coil Surface Coating** that COMMENCED CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after January 5, 1981 [40 CFR §60 Subpart TT].

(25) Any **Asphalt Processing Plant and Asphalt Roofing Plant** that COMMENCED CONSTRUCTION or MODIFICATION after November 18, 1980 [40 CFR §60 Subpart UU].

(26) Any **Synthetic Organic Chemical Manufacturing Facility** COMMENCING CONSTRUCTION or MODIFICATION after January 5, 1981 that has a production design capacity exceeding 1102.3 tons per year [40 CFR §60 Subpart VV].

(27) Any **Bulk GASOLINE Terminal** COMMENCING CONSTRUCTION or MODIFICATION after December 17, 1980 that has a throughput exceeding 19997.8 gallons per day [40 CFR §60 Subpart XX].

(28) Any **Polymer Manufacturing Facility with VOC EMISSIONS** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after September 30, 1987 that has a production design capacity exceeding 1102.3 tons per year [40 CFR §60 Subpart DDD].

(29) Any **Rotogravure Printing Facility Utilizing Flexible Vinyl and Urethane Coating and Printing** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after January 18, 1983 [40 CFR §60 Subpart FFF].

(30) Any **Petroleum Dry Cleaning Plant** COMMENCING CONSTRUCTION or MODIFICATION after December 14, 1982 with a manufacturers' total rated dryer capacity equal to or exceeding 84 pounds. Exception: A plant consuming less that 4700 gallons that has a dryer installed between December 14, 1982 and September 21, 1984 is not subject to the PART 70 requirements [40 CFR §60 Subpart JJJ].

(31) Any **NON-METALLIC MINERAL PROCESSING PLANT** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after August 31, 1983 [40 CFR §60 Subpart OOO].

(32) Any **Magnetic Tape Coating Facility** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after January 22, 1986 [40 CFR §60 Subpart SSS].

(33) Any **Facility Performing Industrial Surface Coating of Plastic Parts for Business Machines** COMMENCING CONSTRUCTION,

MODIFICATION, or RECONSTRUCTION after January 8, 1986 [40 CFR §60 Subpart TTT].

(34) Any **Mineral Processing Plant Utilizing Calciners and Dryers** [40 CFR §60 Subpart UUU].

(35) Any **Facility Utilizing Polymeric Coating of Supporting Substrates** COMMENCING CONSTRUCTION, MODIFICATION, or RECONSTRUCTION after April 30, 1987 [40 CFR §60 Subpart VVV].

(36) Any **STATIONARY SOURCE that processes Beryllium, Beryllium Oxide or any Alloy** containing more than 5% Beryllium by weight [40 CFR §61 Subpart C].

(37) Any **STATIONARY SOURCE that processes Mercury, including Mercury ore or the use of Mercury chlor-alkali cells** to produce chlorine GAS and alkali metal hydroxide [40 CFR §61 Subpart E].

(38) Any **STATIONARY SOURCE that processes Vinyl Chloride**, including polymerized vinyl chloride [40 CFR §61 Subpart F].

(39) Any **STATIONARY SOURCE that processes ASBESTOS** [40 CFR §61 Subpart M].

(40) Any **STATIONARY SOURCE utilizing Perchloroethylene** at a Dry Cleaning Facility, [40 CFR §63 Subpart M]

0.125 "PART 70 PERMIT MODIFICATION" means a revision to a PART 70 PERMIT that meets the requirements of Subsection 19.5.5.

0.126 "PARTICULATE MATTER" means any material except uncombined water that exists in a finely divided form as a liquid or solid at referenced conditions of 25^{o} C and 760 mm mercury.

0.127 "PAVE" means the application and maintenance of asphalt, concrete, or other similar material on a roadway surface (i.e., asphaltic concrete, concrete pavement, chip seal, or rubberized asphalt).

0.128 "PERMIT FOR CONSTRUCTION ACTIVITIES" means a permit required by Section 17 of these Regulations. It is issued for CONSTRUCTION ACTIVITY including surface grading and trenching.

0.129 "PERMIT REVISION" means any permit MODIFICATION or administrative permit amendment.

0.130 "PERSON" means United States of America, the STATE OF NEVADA, any individual, group of individuals, partnership, firm, company, corporation, association, trust estate, political subdivision, administrative agency, public or quasi-public corporation, or other legal entity.

0.131 "PM_{10} MITIGATION FEE" means a fee collected from CONSTRUCTION ACTIVITIES conducted in the LAS VEGAS VALLEY, Boulder City and ELDORADO VALLEY. This fee is expended on paving of unpaved roads thereby achieving a reduction in PM_{10} EMISSIONS.

0.132"PM_{10} NONATTAINMENT AREA" means that area which has been designated as nonattainment for the National AMBIENT AIR Quality Standards for PM_{10} by the EPA and which coincides with the area designated as HYDROGRAPHIC BASIN 212 (approximated by the attached map).

0.133 "PM_{10}" means PARTICULATE MATTER, both filterable and condensable, with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers.

(a) Any HAZARDOUS AIR POLLUTANT (HAP), considered to be PARTICULATE MATTER less than or equal to ten (10) micrometers, shall be subject to the more stringent requirements in the Regulations.

0.134 "POTENTIAL TO EMIT" means the maximum capacity of an EMISSIONS UNIT to EMIT any REGULATED AIR POLLUTANT under its physical and operational design. Any physical or operational limitation on the capacity of the EMISSIONS UNIT to EMIT any REGULATED AIR POLLUTANT, including AIR POLLUTION control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on EMISSIONS is FEDERALLY ENFORCEABLE.

0.135 "PRIME COAT" means the first film of coating applied in a two-coat operation.

0.136 "PROCESS EQUIPMENT" means any equipment, including portable equipment, used for storing, handling, conveying, processing or changing any materials whatsoever, but excluding that equipment specifically defined in these Regulations.

0.137 "PROCESS WEIGHT" means the total weight of all materials introduced into any specific process which process may cause any discharge into the atmosphere. Solid FUELS charged will be considered as part of the PROCESS WEIGHT, but liquid and gaseous FUELS and combustion air will not.

"PROCESS WEIGHT per Hour" will be derived by dividing the total PROCESS WEIGHT by the number of hours in one complete operation thereof, excluding any time during which the equipment is idle.

0.138 "PROPOSED PERMIT" means the version of a permit that the CONTROL OFFICER proposes to issue and forward to the EPA for review.

0.139 "PSD" means Prevention of Significant Deterioration

0.140 "PUBLIC ROAD" means the OWNER AND/OR OPERATOR is a governmental entity, who has accepted ownership of the road through a formal action of the governing board; and, who has also accepted maintenance responsibilities for the road through a separate action of its governing board or designee. All other roads are private.

0.141 "RECLAIMED WATER" means wastewater that, as a result of appropriate treatment, is suitable for subsequent beneficial use. RECLAIMED WATER does not meet the STATE of Nevada standards for potable water.

0.142 "REGISTRY" means a public record of the ownership, creation, deposit, use, sale of or transfer of ERCs.

0.143 "REGULATED AIR POLLUTANT" means any pollutant subject to:

(a) A standard under section 111 of the ACT,

(b) or any pollutant subject to a standard promulgated under section 112 of the ACT, including any pollutant emitted in major amounts by a source subject to 112(j) and any pollutant that is regulated under section 112(g),

(c) or any Class I and Class II substances subject to a standard promulgated under or established by Title VI of the ACT,

(d) and any of the following substances that are regulated pursuant to Section 12:

(1) Ammonia
(2) Ammonium Particles
(3) ASBESTOS
(4) Beryllium and compounds
(5) Bromine
(6) Carbon Monoxide (CO)
(7) Chlorine

(8) Chlorine Dioxide
(9) Fluorides
(10) Germanium Tetrahydride
(11) Hydrogen Bromide
(12) Hydrogen Chloride
(13) Hydrogen Cyanide
(14) Hydrogen Selenide
(15) Hypochlorous Acid
(16) Hypochlorite Particles
(17) Lead (Pb)
(18) Mercury
(19) Nitrate Particles
(20) Nitric Acid
(21) Nitrogen Oxides (Nox)
(22) Osmium Tetroxide
(23) Ozone
(24) PARTICULATE MATTER
(25) PARTICULATE MATTER-10 (PM_{10})
(26) Perchloryl Fluoride
(27) Reduced Sulfur Compounds
(28) Silicon Tetrahydride
(29) Sulfuric Acid Mist
(30) Sulfur Dioxide (SO_2)
(31) Sulfur Trioxide or VAPOR phase Sulfuric Acid
(32) Sulfuryl Fluoride
(33) Total Reduced Sulfur (including H_2S)
(34) Tellurium Compounds
(35) Vinyl Chloride
(36) VOLATILE ORGANIC COMPOUNDS (VOC)

0.144 "RENEWAL" means the process by which a permit is reissued at the end of its term.

0.145 "REPRESENTATIVE OF ALLEGED VIOLATOR" means an employee of the alleged violator or a licensed legal and/or technical representative of the alleged violator or an individual authorized in writing to represent the alleged violator.

0.146 "RESPONSIBLE OFFICIAL" means one of the following:

(1) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other PERSON who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such PERSON if the representative is responsible for the overall

operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(a) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or

(b) The delegation of authority to such representative is approved in advance by the permitting authority.

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(3) For a municipality, STATE, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes relating to Section 19, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional ADMINISTRATOR of EPA).

(4) For AFFECTED SOURCES:

(a) The DESIGNATED REPRESENTATIVE in so far as actions, standards, requirements, or prohibitions under Title IV of the ACT or the regulations promulgated thereunder.

(b) The DESIGNATED REPRESENTATIVE for any other purposes under Section 19.

0.147 "ROAD EASEMENT" means an EASEMENT utilized by the EASEMENT HOLDER, or others with the permission of the EASEMENT HOLDER, for travel by MOTOR VEHICLE. In the case of a ROAD EASEMENT the Owner AND/OR Operator is the EASEMENT HOLDER.

0.148 "SECTION 502(B)(10) CHANGES" means changes that contravene an express permit term. Such changes do not include changes that would violate APPLICABLE REQUIREMENTS or contravene FEDERALLY ENFORCEABLE permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.

0.149 "SINGLE COAT" means a single film of coating applied directly to the material being coated omitting the prime application.

0.150 "SLOW CURING (SC)" means a cutback asphalt generally using a low volatility FUEL OIL as a solvent.

0.151 "STACK" means a STACK, chimney, flue, duct or other opening for purposes of carrying smoke, dust, GAS, VAPOR or ODOR into the open air.

0.152 "STAGE I" means GASOLINE VAPOR recovery during transfer of GASOLINE from GASOLINE delivery vehicles to stationary tanks used for re-fueling MOTOR VEHICLES.

0.153 "STAGE II" means GASOLINE VAPOR recovery during MOTOR VEHICLE re-fueling operations from stationary tanks.

0.154 "STATE" means any non-Federal permitting authority, including any local agency, interstate association, or statewide program.

0.155 "STATIONARY SOURCE" means any building, structure, facility, equipment, engine, or installation, except CONSTRUCTION ACTIVITY which EMITS or has the POTENTIAL TO EMIT any REGULATED AIR POLLUTANT and all pollutants listed pursuant to section 112(b) of the ACT. A STATIONARY SOURCE is composed of all of the EMISSION UNITS located on one or more contiguous or adjacent properties under control of the same PERSON (or PERSONS under common control), that comprise one, or more of the following categories:

(a) Source Specific STATIONARY SOURCE:

(1) GASOLINE DISPENSING FACILITIES
(Type of Air Pollutant: VOC)

(2) Drycleaners
(Type of Air Pollutant: Perchloroethylene)

(3) NON-METALLIC MINERAL PROCESSING FACILITIES
(Type of Air Pollutant: PM_{10})

(4) FUEL BURNING EQUIPMENT that aggregates to a maximum heat input rate equal to or exceeding ten (10) million (MM) Btu per hour.

(5) Commercial Surface Coating Operations including spray paint booths
(Type of Air Pollutant: VOC)

(6) Hard and Decorative Chromium Electroplating and Chromium Anodizing Operations
(Type of Air Pollutant: Chromium)

(7) Industrial Process Cooling Towers, subject to Subsection 20.1.10 (which limits chromium EMISSIONS)
(Type of Air Pollutant: Chromium & PM_{10})

(8) Sterilization Facilities
(Type of Air Pollutant: Ethylene Oxide)

(9) Synthetic Organic Chemical Manufacturing Facilities
(Type of Air Pollutant: Organic HAZARDOUS AIR POLLUTANTS)

(10) Facilities utilizing Halogenated Solvents for Cleaning

(11) Stationary Internal Combustion Engine that has a brake horsepower rating equal to or exceeding 35 horsepower, or 26 kilowatts, except for EMERGENCY STANDBY GENERATORS.

(12) EMERGENCY STANDBY GENERATOR that has a brake horsepower rating equal to or exceeding 500 horsepower, or 373 kilowatts.

(b) MAJOR STATIONARY SOURCE:

(1) Any STATIONARY SOURCE is considered Major if it EMITS or has a total POTENTIAL TO EMIT, including any NET EMISSIONS INCREASE due to MODIFICATION, for any REGULATED AIR POLLUTANT equal to or exceeding the following amounts:

Air Pollutant	**Non-Attainment or Management Area Emission Rate (Controlled)** [tons per year]	**PSD Area Emission Rate (Controlled)** [tons per year]
PM_{10}	70	100
CO	70	100
VOC	50	100
NO_x	50	100
SO_2		100
Lead (Pb)		0.6

HAZARDOUS AIR POLLUTANT (HAP)		10 each or 25 combined
TOXIC CHEMICAL SUBSTANCE (TCS)		1.0

For purposes of determining whether a source is major, FUGITIVE EMISSIONS shall be included if the STATIONARY SOURCE belongs to one of the following categories:

(i) Coal cleaning plants (with thermal dryers);
(ii) Kraft pulp mills; Portland cement plants;
(iii) Primary zinc smelters;
(iv) Iron and steel mills;
(v) Primary aluminum ore reduction plants;
(vi) Primary copper smelters;
(vii) Municipal INCINERATORS capable of charging more than 250 tons of refuse per day;
(viii) Hydrofluoric, sulfuric, or nitric acid plants;
(ix) Petroleum refineries;
(x) Lime plants;
(xi) Phosphate rock processing plants;
(xii) Coke oven batteries;
(xiii) Sulfur recovery plants;
(xiv) Carbon black plants (furnace process);
(xv) Primary lead smelters;
(xvi) Fuel conversion plants;
(xvii) Sintering plants;
(xviii) Secondary metal production plants;
(xix) CHEMICAL PROCESS plants;
(xx) Fossil-fuel boilers (or combination thereof) totaling more than 250 million BRITISH THERMAL UNITS per hour heat input;
(xxi) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
(xxii) Taconite ore processing plants;
(xxiii) Glass fiber processing plants;
(xxiv) Charcoal production plants;
(xxv) Fossil fuel-fired steam electric plants of more than 250 million BRITISH THERMAL UNITS per hour heat input; and
(xxvi) Any other STATIONARY SOURCE category regulated under sections 111 or 112 of the ACT

(2) or, at such time that a particular source or MODIFICATION becomes a MAJOR STATIONARY SOURCE or Major MODIFICATION

solely by virtue of a relaxation in any enforcement limitation which was established after August 7, 1980, on the capacity of the source or MODIFICATION otherwise to EMIT a pollutant, such as a restriction on hours of operation, then the requirements of regulations approved pursuant to this shall apply to the source or MODIFICATION as though CONSTRUCTION had not yet COMMENCED on the source or MODIFICATION.

(c) NON-MAJOR STATIONARY SOURCE:

(1) Unless specifically exempted under (a), any STATIONARY SOURCE is considered Non-Major if it has a total POTENTIAL TO EMIT, including any NET EMISSIONS INCREASE due to MODIFICATION, for all REGULATED AIR POLLUTANTS less than the EMISSION rates listed in (b)(1):

(d) EXEMPT STATIONARY SOURCE:

(1) A STATIONARY SOURCE is considered Exempt if the EMISSIONS, calculated without the application of AIR POLLUTION control technology or limits on the hours of operation, are less than all of the following enumerated limits for all non specified source categories:

Type of Air Pollutant	**Uncontrolled Emissions** [tons per year]
PM_{10}	1.0
CO	2.0
VOC	2.0
NO_x	2.0
SO_2	1.0
Lead (Pb)	0.3
HAZARDOUS AIR POLLUTANT (HAP)	1.0
TOXIC CHEMICAL SUBSTANCE (TCS)	1.0

0.156 "TEMPORARY STATIONARY SOURCE" means a STATIONARY SOURCE, as defined in Section 0, with POTENTIAL TO EMIT EMISSIONS less than the Major Source threshold for any REGULATED AIR POLLUTANT with a maximum operational lifetime of no more than three hundred sixty-five (365) continuous days at one specific location.

0.157 "TOP COAT" means the final film of coating applied to a two-coat operation.

0.158 "TOP OFF" means to attempt to dispense GASOLINE to a MOTOR VEHICLE FUEL tank after a VAPOR recovery dispensing nozzle has shut off automatically. The filling of those vehicle tanks which, because of the nature and configuration of the fill pipe, causes premature shut off of the dispensing nozzle, and which are filled only after the seal between the fill pipe and the nozzle is broken, shall not be considered topping off.

0.159 "TOPSOIL" means the layer of the soil, which by its humus content supports vegetation. It is usually the top six inches of soil but may extend to deeper depth.

0.160 "TOTAL SUSPENDED PARTICULATES" (TSP) means PARTICULATE MATTER as measured by the method described in Appendix B in Chapter 40, Part 50, Code of Federal Regulations.

0.161 "TOXIC CHEMICAL SUBSTANCE (TCS)" means any of the following air pollutants:

(1) Ammonia
(2) Ammonium Particles
(3) Bromine
(4) Chlorine
(5) Chlorine Dioxide
(6) Fluorides
(7) Germanium Tetrahydride
(8) Hydrogen Bromide
(9) Hypochlorite Particles
(10) Hypochlorous Acid
(11) Nitrate Particles
(12) Nitric Acid
(13) Osmium Tetroxide
(14) Perchloryl Fluoride
(15) Reduced Sulfur Compounds
(16) Silicon Tetrahydride
(17) Sulfuric Acid Mist
(18) Sulfur Trioxide or VAPOR phase Sulfuric Acid
(19) Sulfuryl Fluoride
(20) Tellurium Compounds
(21) Total Reduced Sulfur (including H_2S)

0.162 "TRENCH" means a long and narrow excavation at least two (2) feet deep made for the purpose of installing or removing utility service lines (pipes, casing, conduits, cable, etc.). This includes main line and lateral spurs.

0.163 "TRIGGER DATE" means the date after which a NON-MAJOR SOURCE BASELINE DATE may be established for a specific area (as defined in subsection 12.2). The TRIGGER DATE shall not be prior to the following dates:

Pollutant	Date
PM_{10}	August 7, 1977
SO_2	August 7, 1977
NO_2	February 8, 1988

0.164 "UNPAVED PARKING LOT" means any area of 5,000 square feet or larger that is not PAVED and that is used for parking, maneuvering, or storing MOTOR VEHICLES.

0.165 "UPSET/BREAKDOWN" means:

(1) Any sudden failure of AIR POLLUTION control equipment or PROCESS EQUIPMENT which results in EMISSIONS of air pollutants, or

(2) A shutdown of AIR POLLUTION control equipment or PROCESS EQUIPMENT which has not been scheduled for twenty-four (24) hours in advance, after notification to CONTROL OFFICER, and which results in EMISSIONS of air pollutants.

0.166 "VACANT LOT" (See definition of OPEN AREAS AND VACANT LOTS).

0.167 "VAPOR" means the gaseous phases of a substance that at normal temperature and pressures is a liquid or solid.

0.168 "VAPOR CONTROL SYSTEM" means a device or combination of devices into which VAPORS are passed before being vented into the atmosphere.

0.169 "VAPOR TIGHT" means a reading of less than 10,000 ppm, above background, as methane, when measured at a distance of one centimeter from the leak source with a portable hydrocarbon detection instrument. Background is defined as the ambient concentration of organic compounds determined at least three meters upwind from any equipment to be inspected and which is uninfluenced by any specific EMISSION permit unit.

0.170 "VARIOUS LOCATIONS ACTIVITY" means a TEMPORARY STATIONARY SOURCE with a POTENTIAL TO EMIT less than the EMISSIONS listed pursuant to

subsection 12.1.3.1(a)(5), which is comprised of any portable facility, portable equipment, portable engine, or CONSTRUCTION ACTIVITY that is associated with NON-METALLIC MINERAL PROCESSING, hot mix asphalt production, concrete production, or other temporary operation that EMITS or has the POTENTIAL TO EMIT any REGULATED AIR POLLUTANT and all pollutants listed pursuant to section 112(b) of the ACT. A VARIOUS LOCATIONS ACTIVITY is composed of all of the EMISSION UNITS located on one or more contiguous or adjacent properties under control of the same PERSON (or PERSONS under common control).

0.171 "VOLATILE ORGANIC COMPOUND (VOC)" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions.

(a) This includes any such organic compound, other than the following, which have been determined to have negligible photochemical reactivity:

(1) Methane
(2) Ethane
(3) Methylene Chloride (Dichloromethane)
(4) 1,1,1-Trichloroethane (Methyl Chloroform)
(5) 1,1,1-Trichloro-1,2,2-trifluoroethane (CFC-113)
(6) Trichlorofluoromethane (CFC-11)
(7) Dichlorodifluoromethane (CFC-12)
(8) Chlorodifluoromethane (HCFC-22)
(9) Trifluoromethane (HFC-23)
(10) 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC-114)
(11) Chloropentafluoroethane (CFC-115)
(12) 1,1,1-Trifluoro 2,2-dichlorotrifluoroethane (HCFC-123)
(13) 1,1,1,2-Tetrafluoroethane (HFC-134a)
(14) 1,1-Dichloro-1-fluoroethane (HCFC-141b)
(15) 1-Chloro-1,1-difluoroethane (HCFC-142b)
(16) 2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
(17) Pentafluoroethane (HFC-125)
(18) 1,1,2,2-Tetrafluoroethane (HFC-134)
(19) 1,1,1-Trifluoroethane (HFC-143a)
(20) 1,1-Difluoroethane (HFC-152a)
(21) Parachlorobenzotrifluoride (PCBTF)
(22) Cyclic, branched, or linear completely methylated siloxanes
(23) Acetone
(24) and Perfluorocarbon compounds which fall into these classes:

(i) Cyclic, branched, or linear, completely fluorinated alkanes;
(ii) Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
(iii) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
(iv) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

(b) Any HAZARDOUS AIR POLLUTANT (HAP), considered to be a VOLATILE ORGANIC COMPOUND (VOC), shall be subject to the more stringent requirements in the Regulations.

0.172 "WASTE" means useless, unneeded or superfluous matter, or discarded or excess material.

APPENDIX G

Air Quality Regulations

Section 90

Fugitive Dust from Open Areas and Vacant Lots

SECTION 90 - FUGITIVE DUST FROM OPEN AREAS AND VACANT LOTS

90.1 **FUGITIVE DUST From OPEN AREAS AND VACANT LOTS**

90.1.1 **Purpose:** To limit the EMISSION of PARTICULATE MATTER into the AMBIENT AIR from OPEN AREAS AND VACANT LOTS.

90.1.2 **Applicability:** The provisions of this Regulation shall apply to OPEN AREAS AND VACANT LOTS which are located in the PM_{10} NONATTAINMENT AREA (HYDROGRAPHIC BASIN 212). Nothing in Section 90 of these Regulations shall be construed to prevent enforcement of Section 40 (Prohibition of NUISANCE Conditions) of these Regulations. The provisions of this Regulation shall not apply to Normal Farm Cultural Practices or the raising of fowl or animals.

90.1.3 **Effective Date Of This Regulation:** Section 90, adopted by the District Board of Health of Clark County on June 22, 2000, shall be effective on January 1, 2001.

90.2 **Requirements:**

90.2.1 **OPEN AREAS AND VACANT LOTS:** If OPEN AREAS AND VACANT LOTS are 5,000 square feet or larger and are disturbed by any means, including use by MOTOR VEHICLES and/or OFF-ROAD MOTOR VEHICLES or material dumping, then the OWNER AND/OR OPERATOR of such OPEN AREAS AND VACANT LOTS shall implement one of the CONTROL MEASURES described in Subsection 90.2.1.1 of this Regulation within 30 calendar days following the initial discovery of disturbance or vehicle use on OPEN AREAS AND VACANT LOTS. **Advisory Notice:** In order to conserve water to the greatest extent practicable, the use of RECLAIMED WATER is highly encouraged.

90.2.1.1 **CONTROL MEASURES:**

(a) Where there is evidence of soil disturbance by MOTOR VEHICLES and/or OFF-ROAD VEHICLE use, prevent MOTOR VEHICLE and/or OFF-ROAD VEHICLE trespassing, parking, and/or access, by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees, or other effective traffic Control Measures; a stable surface area shall be established and maintained by using one of the Control Measures set forth in Subsections 90.2.1.1(b) or (c) or by the effective application of water in compliance with the stabilization standards set forth in Subsection 90.2.1.2. Where measures to prevent vehicular trespassing and movement are not effective, the application of water will not be utilized for surface stabilization. For the purposes of this Subsection, use of or parking on OPEN AREAS AND VACANT LOTS for noncommercial and non-institutional purposes by the OWNER AND/OR OPERATOR of such OPEN AREAS AND VACANT LOTS shall not be considered vehicle use under this Subsection. In addition, vehicle use related to landscaping maintenance shall not be considered vehicle use under this Subsection. For the purpose of this Regulation, landscape maintenance does not include grading, trenching, or any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes; or

(b) Where greater than 5,000 square feet of cumulatively DISTURBED SURFACE AREA exists (including disturbed surfaces caused by MOTOR VEHICLES), uniformly apply and maintain surface gravel or DUST PALLIATIVES to all areas disturbed by MOTOR VEHICLES in compliance with one of the stabilization standards described in Subsection 90.2.1.2 of this Regulation; or

(c) Where greater than 5,000 square feet of cumulatively DISTURBED SURFACE AREA exists (including disturbed surfaces caused by MOTOR VEHICLES and/or OFF-ROAD MOTOR VEHICLES), apply and maintain an alternative CONTROL MEASURE approved in writing by the CONTROL OFFICER and the Region IX ADMINISTRATOR of the Environmental Protection Agency (EPA).

90.2.1.2 **Stabilization Standards:**

(a) A visible crust shall be established, as determined by Subsection 90.4.1.1 (The Drop Ball/Steel Ball Test) of these Regulations; or,

(b) A percent cover that is equal to or greater than 20% for non-erodible elements shall be established, as determined by Subsection 90.4.1.2 (Rock Test Method) of these Regulations; or,

(c) A threshold friction velocity, corrected for non-erodible elements of 100 cm/second or higher, shall be established, as determined by Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation; or,

(d) An alternative test method approved in writing by the CONTROL OFFICER and the Region IX ADMINISTRATOR of the EPA.

90.2.2 **Weed Abatement By Discing or Blading**: If discing or blading is used to clear weeds from OPEN AREAS AND VACANT LOTS of 5,000 square feet or larger, then the following Control Measures set forth in Subsection 90.2.2.1 shall be applied. **Advisory Notice:** In order to conserve water to the greatest extent practicable, the use of RECLAIMED WATER is highly encouraged.

90.2.2.1 **CONTROL MEASURES**

(a) Apply water before weed abatement by discing or blading occurs; and,

(b) Apply water while weed abatement by discing or blading is occurring; and,

(c) PAVE, apply gravel, apply water, or apply a suitable DUST PALLIATIVE, in compliance with the stabilization standards set forth in Subsection 90.2.1.2 of this Regulation, after weed abatement by discing or blading occurs.

90.3 Record Keeping Requirements

90.3.1 **Record Keeping:** Any person subject to the requirements of this Regulation shall compile and retain records that provide evidence of CONTROL MEASURE application, by indicating type of treatment or CONTROL MEASURE, extent of coverage, and date applied. The records and supporting documentation shall be made available to the CONTROL OFFICER within 24 hours from written or verbal request.

90.3.2 **Record Retention:** Copies of the records required by Subsection 90.3.1 (Record Keeping Requirements) of this Regulation shall be retained for at least one year.

90.4 Test Methods

90.4.1 **Stabilization Standards For OPEN AREAS AND VACANT LOTS**: The test methods described in Subsections 90.4.1.1 through Subsections 90.4.1.3 of this Regulation shall be used to determine whether an OPEN AREA or a VACANT LOT has a stabilized surface. Should a disturbed OPEN AREA or VACANT LOT contain more than one type of disturbance, soil, or other characteristics which are visibly distinguishable, each representative surface must be tested separately for stability in an area that represents a random portion of the overall disturbed conditions of the site, utilizing the appropriate test methods in Subsections 90.4.1.1 through Subsections 90.4.1.3 of this Regulation. Depending upon test method results, include or eliminate each representative surface from the total size assessment of the DISTURBED SURFACE AREA(S).

90.4.1.1 **Soil Crust Determination** (**The Drop Ball Test):** Drop a steel ball with a diameter of 15.9 millimeters (0.625 inches) and a mass ranging from 16-17 grams from a distance of 30 centimeters (one foot) directly above the soil surface. If blowsand is present, clear the blowsand from the surfaces on which the soil crust test method is conducted. Blowsand is defined as thin deposits of loose uncombined grains covering less than 50% of an OPEN AREA or VACANT LOT which have not originated from the representative OPEN AREA or VACANT LOT surface being tested. If material covers a visible crust, which is not blowsand, apply the test method in Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation to the loose material to determine whether the surface is stabilized.

(a) A sufficient crust is defined under the following conditions: once a ball has been dropped according to Subsection 90.4.1.1 of this

Regulation, the ball does not sink into the surface, so that it is partially or fully surrounded by loose grains and, upon removal of the ball, the surface upon which it fell has not been pulverized, so that loose grains are visible.

(b) Randomly select each representative disturbed surface for the drop ball test by using a blind "over the shoulder" toss of a throwable object (for example, a metal weight with survey tape attached). Using the point of fall as the lower left hand corner, measure a 1-foot square area. Drop the ball three times within the 1-foot by 1-foot square survey area, using a consistent pattern across the survey area. The survey area shall be considered to have passed the Soil Crust Determination Test if at least two of the three times the ball was dropped, the results met the criteria in Subsection 90.4.1.1(a) of this Regulation. Select at least two other survey areas that represent a random portion of the overall disturbed conditions of the site, and repeat this procedure. If the results meet the criteria of Subsection 90.4.1.1(a) of this Regulation for all of the survey areas tested, then the site shall be considered to have passed the Soil Crust Determination Test and shall be considered sufficiently crusted.

(c) At any given site, the existence of a sufficient crust covering one portion of the site may not represent the existence or protectiveness of a crust on another portion of the site. Repeat the soil crust test as often as necessary on each portion of the overall conditions of the site using the random selection method set forth in Subsection 90.4.1.1(b) of this Regulation for an accurate assessment.

90.4.1.2 **Rock Test Method:** The Rock Test Method, which is similar to Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation, examines the wind-resistance effects of rocks and other non-erodible elements on disturbed surfaces. Non-erodible elements are objects larger than 1 centimeter (cm) in diameter that remain firmly in place even on windy days. Typically, non-erodible elements include rocks, stones, glass fragments, and hardpacked clumps of soil lying on or embedded in the surface. Vegetation does not count as a non-erodible element in this method. The purpose of this test method is to estimate the percent cover of non-erodible elements on a given surface to see whether such elements take up enough space to offer protection against windblown dust. For simplification, the following test method refers to all non-erodible elements as "rocks."

(a) Randomly select a 1 meter by 1 meter survey area within an area that represents the general rock distribution on the surface (a 1 meter by 1 meter area is slightly greater than a 3 foot by 3 foot area). Use a blind "over the shoulder" toss of a throwable object (for example, a metal weight with survey tape attached) to select the survey surface and using the point of fall as the lower left hand corner, measure a 1 meter by 1 meter survey area. Mark-off the survey area by tracing a straight, visible line in the dirt along the edge of a measuring tape or by placing short ropes, yard sticks, or other straight objects in a square around the survey area.

(b) Without moving any of the rocks or other elements, examine the survey area. Since rocks greater than 3/8 inch (1 cm) in diameter are of interest, measure the diameter of some of the smaller rocks to a get a sense of which rocks need to be considered.

(c) Mentally group the rocks greater than 3/8 inch (1cm) diameter lying in the survey area into small, medium, and large size categories. If the rocks are all approximately the same size, simply select a rock of average size and typical shape. Without removing any of the rocks from the ground, count the number of rocks in the survey area in each group and write down the resulting number.

(d) Without removing rocks, select one or two average-size rocks in each group and measure the length and width. Use either metric units or standard units. Using a calculator, multiply the length times the width of the rocks to get the average dimensions of the rocks in each group. Write down the results for each rock group.

(e) For each rock group, multiply the average dimensions (length times width) by the number of rocks counted in the group. Add the results from each rock group to get the total rock area within the survey area.

(f) Divide the total rock area, calculated in Subsection 90.4.1.2(e) of this Regulation, by two (to get frontal area). Divide the resulting number by the size of the survey area (make sure the units of measurement match), and multiply by 100 for percent rock cover. For example, the total rock area is 1,400 square centimeters, divide 1,400 by 2 to get 700. Divide 700 by 10,000 (the survey area is 1 meter by 1 meter, which is 100 centimeters by 100 centimeters or 10,000 centimeters) and multiply by 100. The result is 7% rock cover. If rock measurements are made in inches, convert the survey area from meters to inches (1 inch = 2.54 centimeters).

(g) Select and mark-off two additional survey areas and repeat the procedures described in Subsection 90.4.1.2(a) through Subsection 90.4.1.2(f) of this Regulation. Make sure the additional survey areas also represent the general rock distribution on the site. Average the percent cover results from all three survey areas to estimate the average percent of rock cover.

(h) If the average rock cover is greater than or equal to 20%, the surface is stable. **I**f the average rock cover is less than 20%, follow the procedures in Subsection 90.4.1.2(i) of this Regulation.

(i) If the average rock cover is less than 20%, the surface may or may not be stable. Follow the procedures in Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation and use the results from the rock test method as a correction (i.e., multiplication) factor. If the rock cover is at least 1%, such rock cover helps to limit windblown dust. However, depending on the soil's ability to release fine dust particles into the air, the percent rock cover may or may not be sufficient enough to stabilize the surface. It is also possible that the soil itself has a high enough Threshold Friction Velocity (TFV) to be stable without accounting for rock cover.

(j) After completing the procedures described in Subsection 90.4.1.2(i) of this Regulation, use Table 2 of this Regulation to identify the appropriate correction factor to the TFV, depending on the percent rock cover. Multiply the correction factor by the TFV value for a final TFV estimate that is corrected for non-erodible elements.

90.4.1.3 **Determination Of Threshold Friction Velocity (TFV):** For DISTURBED SURFACE AREAS that are not crusted or vegetated, determine TFV according to the following sieving field procedure (based on a 1952 laboratory procedure published by W. S. Chepil).

(a) Obtain and stack a set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm, and 0.25 mm, or obtain and stack a set of standard/commonly available sieves. Place the sieves in order according to size openings, beginning with the largest size opening at the top. Place a collector pan underneath the bottom (0.25 mm) sieve. Collect a sample of loose surface material from an area at least 30 cm by 30 cm in size, to a depth of approximately 1 cm using a brush and dustpan or other similar device. Only collect soil samples from dry surfaces (i.e., when the surface is not damp to the

touch). Remove any rocks larger than 1 cm in diameter from the sample. Pour the sample into the top sieve (4 mm opening) and cover the sieve/collector pan unit with a lid. Minimize escape of particles into the air when transferring surface soil into the sieve/collector pan unit. Move the covered sieve/collector pan unit by hand using a broad, circular arm motion in the horizontal plane. Complete twenty circular arm movements, ten clockwise and ten counterclockwise, at a speed just necessary to achieve some relative horizontal motion between the sieves and the particles. Remove the lid from the sieve/collector pan unit and disassemble each sieve separately, beginning with the largest sieve. As each sieve is removed, examine it for loose particles. If loose particles have not been sifted to the finest sieve through which they can pass, reassemble and cover the sieve/collector pan unit and gently rotate it an additional ten times. After disassembling the sieve/collector pan unit, slightly tilt and gently tap each sieve, and the collector pan, so that material aligns along one side. In doing so, minimize escape of particles into the air. Line up the sieves and collector pan in a row and visibly inspect the relative quantities of catch in order to determine which sieve (or whether the collector pan) contains the greatest volume of material. If a visual determination of relative volumes of catch among sieves is difficult, use a graduated cylinder to measure the volume. Estimate TFV for the sieve catch with the greatest volume using Table 1 of this Subsection, which provides a correlation between sieve opening size and TFV.

Table 1. Determination Of Threshold Friction Velocity

Tyler Sieve No.	ASTM 11 Sieve No.	Opening (mm)	TFV (cm/s)
5	5	4	135
9	10	2	100
16	18	1	76
32	35	0.5	58
60	60	0.25	43
Collector Pan—	—	30	

(b) Collect at least three soil samples which represent random portions of the overall conditions of the site, repeat the above TFV test method for each sample and average the resulting TFVs together to determine the TFV uncorrected for non-erodible elements. Non-erodible elements are distinct elements, in the random portion of the overall conditions of the site, that are larger than 1 cm in diameter, remain firmly in place during a wind episode, and inhibit soil loss by consuming part of the shear stress of the wind. Non-erodible elements include stones and bulk surface material but do not include flat or standing vegetation. For surfaces with non-erodible elements, determine corrections to the TFV by identifying the fraction of the survey area, as viewed from directly overhead, that is occupied by non-erodible elements using the following procedure. For a more detailed description of this procedure, see Subsection 90.4.1.2 (Rock Test Method) of this Regulation. Select a survey area of 1 meter by 1 meter that represents a random portion of the overall conditions of the site. Where many non-erodible elements lie within the survey area, separate the non-erodible elements into groups according to size. For each group, calculate the overhead area for the non-erodible elements according to the following equations:

Eq. 1: (Average length) x (Average width) = Average Dimensions.
Eq. 2: (Average Dimensions) x (Number of Elements) = Overhead Area.
Eq. 3: Overhead Area Of Group 1 + Overhead Area Of Group 2 (etc.) = Total Overhead Area.
Eq. 4: Total Overhead Area/2 = Total Frontal Area.
Eq. 5: (Total Frontal Area/Survey Area) x 100 = Percent Cover Of Non-Erodible Elements.

Note: Ensure consistent units of measurement (e.g. square meters or square inches when calculating percent cover).

Repeat this procedure on an additional two distinct survey areas that represent a random portion of the overall conditions of the site and average the results. Use Table 2 of this Subsection to identify the correction factor for the percent cover of non-erodible elements. Multiply the TFV by the corresponding correction factor to calculate the TFV corrected for non-erodible elements.

Table 2. Correction Factors For Threshold Friction Velocity

Percent Cover Of Non-Erodible Elements	Correction Factor
Greater than or equal to 10%	5
Greater than or equal to 5% and less than 10%	3
Less than 5% and greater than or equal to 1%	2
Less than 1%	None

APPENDIX G

Air Quality Regulations

Section 91

Fugitive Dust from Unpaved Roads, Unpaved Alleys, and Unpaved Easement Roads

SECTION 91 - FUGITIVE DUST FROM UNPAVED ROADS, UNPAVED ALLEYS, AND UNPAVED EASEMENT ROADS

91.1 **FUGITIVE DUST From Unpaved Roads, Unpaved Alleys, and Unpaved EASEMENT Roads**

91.1.1 **Purpose:** To limit the Emission of PARTICULATE MATTER into the AMBIENT AIR from unpaved roads, unpaved alleys, unpaved ROAD EASEMENTS and unpaved access roads for utilities and railroads.

91.1.2 **Applicability:** The provisions of this Regulation shall apply to unpaved roads, which includes unpaved alleys, unpaved ROAD EASEMENTS and unpaved access roads for utilities and railroads which are located in the PM_{10} NON-ATTAINMENT AREA (HYDROGRAPHIC BASIN 212). Nothing in Subsections 91.1 through 91.3 of these Regulations shall be construed to prevent enforcement of Section 40 (Prohibition of NUISANCE Conditions) of these Regulations. The provisions of this Regulation shall not apply to non-commercial and non-institutional private driveways and shall not apply to horse trails, hiking paths, bicycle paths, or other similar paths that have been officially designated by a governing body for exclusive use for purposes other than travel by motor vehicles.

91.1.3 **Effective Date Of This Regulation**: Regulations 91.1 through 91.3 shall be effective on their adoption by the District Board of Health of Clark County on June 22, 2000.

91.2 **Requirements:**

91.2.1 **Unpaved Roads:** An OWNER AND/OR OPERATOR of an unpaved road in the PM_{10} NON-ATTAINMENT AREA, shall implement one of the CONTROL MEASURES set forth in Subsection 91.2.1.3 of this Regulation, except as set forth in Subsection 91.2.1.1 of this Regulation. For the purpose of this Regulation, the CONTROL MEASURES shall be considered effectively implemented when the unpaved roadway complies with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation. **Advisory**

Notice: In order to conserve water to the greatest extent practicable, the use of RECLAIMED WATER is highly encouraged.

91.2.1.1 **Implementation Of CONTROL MEASURES For Existing Unpaved Roads:** OWNERS AND/OR OPERATORS of existing unpaved roads that were constructed prior to June 22, 2000, shall implement one of the CONTROL MEASURES set forth Subsection 91.2.1.3 of this Regulation according to the following schedule:

(a) CONTROL MEASURES shall be implemented for one third (1/3) of the total miles of unpaved roads having vehicular traffic of 150 vehicles or more per day in accordance with Subsection 91.2.1.3 (CONTROL MEASURES) of this Regulation by June 1, 2001.

(b) CONTROL MEASURES shall be implemented for two thirds (2/3) of the total miles of unpaved roads having vehicular traffic of 150 vehicles or more per day in accordance with Subsection 91.2.1.3 (CONTROL MEASURES) of this Regulation by June 1, 2002.

(c) CONTROL MEASURES shall be implemented for all unpaved roads having vehicular traffic of 150 vehicles or more per day in accordance with Subsection 91.2.1.3 (CONTROL MEASURES) of this Regulation by June 1, 2003.

(d) CONTROL MEASURES set forth in Subsection 91.2.1.3 shall be implemented for existing unpaved roads on which vehicular traffic is equal to or greater than 150 vehicles per day develops after June 1, 2003. CONTROL MEASURES shall be implemented within 365 calendar days following the initial discovery that vehicular traffic equals or exceeds 150 vehicles per day and that the road surface does not comply with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation. The CONTROL OFFICER may require short-term stabilization of any unpaved road subject to Subsection 91.2.1.1(d).

(e) Non-federal Requirement: CONTROL MEASURES set forth in Subsection 91.2.1.3 shall be implemented for existing unpaved roads having vehicular traffic of less than 150 vehicles per day within 365 calendar days following the initial discovery that the road surface does not comply with the stabilization standards set forth in Section 91.2.1.4 of this Regulation. The requirements of this Subsection (91.2.1.1 (e) shall not constitute applicable State Implementation Plan requirements pursuant to Section 189 of the federal Clean Air Act.

The CONTROL OFFICER may require short-term stabilization of any unpaved road subject to Subsection 91.2.1.1 (e)). For the purpose of this Subsection, the CONTROL MEASURES shall be considered effectively implemented when the unpaved road complies with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation.

91.2.1.2 No unpaved roads or alleys may be constructed in public thoroughfares after June 22, 2000, unless the unpaved road is an interim component of an active paving project.

91.2.1.3 **CONTROL MEASURES:**

(a) PAVE, or

(b) Apply DUST PALLIATIVES, in compliance with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation, or

(c) Apply and maintain and alternative CONTROL MEASURE approved in writing by the CONTROL OFFICER and the Region IX Administrator of the EPA.

91.2.1.4 **Stabilization Standards:** For the purpose of this rule, CONTROL MEASURES shall be considered effectively implemented when stabilization observations for Fugitive Dust EMISSIONS from unpaved roads and unpaved alleys do not exceed 20% OPACITY and do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 6% silt content, as determined by Subsection 91.4.1 of these Regulations.

91.3 Record Keeping Requirements

91.3.1 **Record Keeping:** Any person subject to the requirements of this Regulation shall compile and retain records that provide evidence of CONTROL MEASURE application, by indicating type of treatment or CONTROL MEASURE, extent of coverage, and date applied. The records and supporting documentation shall be made available to the CONTROL OFFICER within 24 hours from written or verbal request.

91.3.2 **Records Retention:** Copies of the records required by Subsection 91.3.1 (Record Keeping Requirements) of this Regulation shall be retained for at least one year.

91.3.3 **Reports Required:** In addition to complying with the record keeping requirements specified in Subsection 91.3.1, Owners of unpaved roads shall be subject to the requirements set forth in Subsection 91.2.1.1, shall prepare and submit a written report to the CONTROL OFFICER documenting compliance with the provisions of Subsection 91.2.1.1. This report shall be prepared for the years 2001, 2002, and 2003 and shall be submitted to the CONTROL OFFICER no later than October first of each year and shall include:

91.3.3.1 The total miles of unpaved roads under the jurisdiction of the Owner and the miles PAVED during the reporting period subject to the requirements of Subsection 91.2.1.1. Miles of PAVING for roads subject to Subsections 91.2.1.1(a), 91.2.1.1(b), and 91.2.1.1.1(c) must be listed separately from paving of roads found to be subject Subsection 91.2.1.1. (d).

91.4 Test Methods

91.4.1 Stabilization Test Methods For Unpaved Roads And Unpaved Alleys:

91.4.1.1 **OPACITY Test Method**: The purpose of this test method is to estimate the percent OPACITY of FUGITIVE DUST plumes caused by vehicle movement on unpaved roads, unpaved alleys, and unpaved Easements. This method can only be conducted by an individual who has received certification as a qualified Visible EMISSIONS Evaluator.

(a) Step 1: Stand at least 16.5 feet from the FUGITIVE DUST source in order to provide a clear view of the EMISSIONS with the sun oriented in the 140-degree sector to the back. Following the above requirements, make OPACITY observations so that the line of vision is approximately perpendicular to the dust plume and wind direction. If multiple plumes are involved, do not include more than one plume in the line of sight at one time.

(b) Step 2: Record the FUGITIVE DUST source location, source type, method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the FUGITIVE DUST source. Also, record the time, estimated distance to the FUGITIVE DUST source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position to the FUGITIVE DUST source, and color of the plume and type of background on the visible emission observation form both when OPACITY readings are initiated and completed.

(c) Step 3: Make OPACITY observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make OPACITY observations approximately 1 meter above the surface from which the plume is generated. Note that the observation is to be made at only one visual point upon generation of a plume, as opposed to visually tracking the entire length of a dust plume as it is created along a surface. Make two observations per vehicle, beginning with the first reading at zero seconds and the second reading at five seconds. The zero-second observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume but, instead, observe the plume briefly at zero seconds and then again at five seconds.

(d) Step 4: Record the OPACITY observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average OPACITY of EMISSIONS for a 5-second period. While it is not required by the test method, EPA recommends that the observer estimate the size of vehicles which generate dust plumes for which readings are taken (e.g. mid-size passenger car or heavy-duty truck) and the approximate speeds the vehicles are traveling when readings are taken.

(e) Step 5: Repeat Step 3 (Subsection 91.4.1.1(c) of this Regulation) and Step 4 (Subsection 91.4.1.1 (d) of this Regulation) until you have recorded a total of 12 consecutive OPACITY readings. This will occur once six vehicles have driven on the source in your line of observation for which you are able to take proper readings. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.

(f) Step 6: Average the 12 OPACITY readings together. If the average OPACITY reading equals 20% or lower, the source is in compliance with the OPACITY standard described in Section 91 of these Regulations.

91.4.1.2 **Silt Content Test Method:** The purpose of this test method is to estimate the silt content of the trafficked parts of unpaved roads, unpaved alleys, and unpaved Easements. The higher the silt content, the greater the amount of fine dust particles that are entrained into the atmosphere when cars and trucks drive on unpaved roads, unpaved alleys, and unpaved EASEMENTS.

(a) Equipment:

(1) A set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm and 0.25 mm, a lid, and collector pan

(2) A small whiskbroom or paintbrush with stiff bristles and dustpan 1 foot in width (the broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length.)

(3) A spatula without holes

(4) A small scale with half ounce increments (e.g., postal/ package scale)

(5) A shallow, lightweight container (e.g., plastic storage container)

(6) A sturdy cardboard box or other rigid object with a level surface

(7) A calculator

(8) Cloth gloves (optional for handling metal sieves on hot, sunny days)

(9) Sealable plastic bags (if sending samples to a laboratory)

(10) A pencil/pen and paper

(b) Step 1: Look for a routinely traveled surface, as evidenced by tire tracks (only collect samples from surfaces that are not damp due to precipitation or dew). This statement is not meant to be a standard in itself for dampness where watering is being used as a CONTROL MEASURE. It is only intended to ensure that surface testing is done in a representative manner. Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you

reach a hard, underlying subsurface that is greater than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1 cm. In order to confirm that samples are collected to 1 cm in depth, a wooden dowel or other similar narrow object at least one foot in length can be laid horizontally across the survey area while a metric ruler is held perpendicular to the dowel.

- At this point, you can choose to place the sample collected into a plastic bag or container and take it to an independent laboratory for silt content analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.

(c) Step 2: Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it. Transfer the entire sample collected in the dustpan to the container, minimizing escape of dust particles. Weigh the sample and record its weight.

(d) Step 3: Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

(e) Step 4: Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush (on windy days, use the trunk or door of a car as a wind barricade). Cover the stack with a lid. Lift up the sieve stack and shake it vigorously up, down and sideways for at least 1 minute.

(f) Step 5: Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g. material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size. If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute (you only need to reassemble the sieve(s) that contain material, which requires further sifting).

(g) Step 6: After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container originally used to collect and weigh the entire sample. Take care to minimize escape of dust particles. You do not need to do anything with material captured in the sieves; only the collector pan. Weigh the container with the material from the collector pan and record its weight.

(h) Step 7: If the source is an unpaved road, multiply the resulting weight by 0.38. If the source is an UNPAVED PARKING LOT, multiply the resulting weight by 0.55. The resulting number is the estimated silt loading. Then, divide by the total weight of the sample you recorded earlier in Step 2 (Subsection 91.4.1.2(c) of this Regulation) and multiply by 100 to estimate the percent silt content.

(i) Step 8: Select another two routinely traveled portions of the unpaved road or UNPAVED PARKING LOT and repeat this test method. Once you have calculated the silt loading and percent silt content of the 3 samples collected, average your results together.

(j) Step 9: Examine Results. If the average silt loading is less than 0.33 oz/ft², the surface is stable. If the average silt loading is greater than or equal to 0.33 oz/ft², then proceed to examine the average percent silt content. If the source is an unpaved road, unpaved alley, or unpaved EASEMENT and the average percent silt content is 6% or less, the surface is stable. If your field test results are within 2% of the standard (for example, 4%-8% silt content on an unpaved road, alley, or EASEMENT), it is recommended that you collect 3 additional samples from the source according to Step 1 (Subsection 91.4.1.2(b) of this Regulation) and take them to an independent laboratory for silt content analysis.

(k) Independent Laboratory Analysis: You may choose to collect 3 samples from the source, according to Step 1 (Subsection 91.4.1.2(b) of this Regulation), and send them to an independent laboratory for silt content analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is:

> "Procedures For Laboratory Analysis Of Surface/Bulk Loading Samples", (Fifth Edition, Volume I, Appendix C.2.3 "Silt Analysis", 1995), AP-42, Office of Air Quality Planning & Standards, U.S. Environmental Protection Agency,

Research Triangle Park, North Carolina

APPENDIX G

Air Quality Regulations

Section 92
Fugitive Dust from
Unpaved Parking Lots

SECTION 92 - FUGITIVE DUST FROM UNPAVED PARKING LOTS

92.1 **FUGITIVE DUST From UNPAVED PARKING LOTS**

92.1.1 **Purpose:** To limit the EMISSION of PARTICULATE MATTER into the AMBIENT AIR from UNPAVED PARKING LOTS.

Applicability: The provisions of this Regulation shall apply to UNPAVED PARKING LOTS which are located in the PM_{10} NON-ATTAINMENT AREA (HYDROGRAPHIC BASIN 212), and which are not regulated by Section 94 of this Regulation. Nothing in Subsections 92.1 through 92.4 of these Regulations shall be construed to prevent enforcement of Section 40 (Prohibition of Nuisance Conditions) of these Regulations.

92.1.3 EFFECTIVE DATE OF THIS REGULATION: Regulations 92.1 through 92.4 shall be effective on their adoption by the District Board of Health of Clark County on June 22, 2000.

92.2 **Requirements:**

92.2.1 **UNPAVED PARKING LOTS:** The OWNER AND/OR OPERATOR of an existing UNPAVED PARKING LOT shall implement one of the CONTROL MEASURES described in Subsection 92.2.1.2 of this Regulation by July 1, 2001. For UNPAVED PARKING LOTS that are utilized intermittently, for a period of 35 days or less during the calendar year, the OWNER AND/OR OPERATOR shall implement one of the CONTROL MEASURES described in Subsection 92.2.1.2 during the period that the UNPAVED PARKING LOT is utilized for vehicle parking. For the purpose of this Regulation, the CONTROL MEASURES set forth in Subsection 92.2.1.2 shall be considered effectively implemented when the UNPAVED PARKING LOT meets the stabilization requirements described in Subsection 92.2.1.3 of this Regulation.

92.2.1.1 No UNPAVED PARKING LOTS may be constructed after June 22, 2000 unless stabilized in accordance with Subsection 92.2.1.2 (b) through (d).

92.2.1.2 **CONTROL MEASURES**:

(a) PAVE, or

(b) Apply DUST PALLIATIVES, in compliance with the stabilization standards set forth in Subsection 92.2.1.3 of this Regulation, or

(c) Apply DUST PALLIATIVES to vehicle travel lanes within the parking lot in compliance with the stabilization standards set forth in Subsection 92.2.1.3 of this Regulation and uniformly apply and maintain surface gravel to a depth of two (2) inches on the vehicle parking areas, or

(d) Apply and maintain an alternative CONTROL MEASURE approved in writing by the CONTROL OFFICER and the Region IX Administrator of the Environmental Protection Agency (EPA).

92.2.1.3 **Stabilization Standards:** For the purpose of this rule, CONTROL MEASURES shall be considered effectively implemented when stabilization observations for FUGITIVE DUST EMISSIONS from UNPAVED PARKING LOTS do not exceed 20% OPACITY and do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 8% silt content, as determined by Subsection 92.4.1 (Test Methods-UNPAVED PARKING LOTS) of these Regulations except for areas on which gravel has been applied under the provisions of Subsection 92.2.1.2(c).

92.3 Record Keeping Requirements

92.3.1 **Record Keeping:** Any person subject to the requirements of this Regulation shall compile and retain records that provide evidence of CONTROL MEASURE application, by indicating type of treatment or CONTROL MEASURE, extent of coverage, and date applied. The records and supporting documentation shall be made available to the CONTROL OFFICER within 24 hours from written or verbal request.

92.3.2 **Records Retention:** Copies of the records required by Subsection 92.3.1 (Record Keeping Requirements) of this Regulation shall be retained for at least one year. Facilities subject to Section 19 (PART 70 OPERATING PERMITS) shall maintain records in accordance with Part 70 record keeping requirements.

92.4 Test Methods

92.4.1 **Stabilization Test Methods For UNPAVED PARKING LOTS:**

92.4.1.1 **OPACITY Test Method**: The purpose of this test method is to estimate the percent OPACITY of FUGITIVE DUST plumes caused by vehicle movement on UNPAVED PARKING LOTS. This method can only be conducted by an individual who has received certification as a qualified Visible EMISSIONS Evaluator.

(a) Step 1: Stand at least 16.5 feet from the FUGITIVE DUST source in order to provide a clear view of the EMISSIONS with the sun oriented in the 140-degree sector to the back. Following the above requirements, make opacity observations so that the line of vision is approximately perpendicular to the dust plume and wind direction. If multiple plumes are involved, do not include more than one plume in the line of sight at one time.

(b) Step 2: Record the FUGITIVE DUST source location, source type, method of control used, if any, evaluator's name, certification data and affiliation, and a sketch of the observer's position relative to the FUGITIVE DUST source. Also, record the time, estimated distance to the FUGITIVE DUST source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and color of the plume and type of background on the visible EMISSION observation form both when OPACITY readings are initiated and completed.

(c) Step 3: Make OPACITY observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make OPACITY observations approximately 1 meter above the surface from which the plume is generated. Note that the observation is to be made at only one visual point upon generation of a plume, as opposed to visually tracking the entire length of a dust plume as it is created along a surface. Make two observations per vehicle, beginning with the first reading at zero seconds and the second reading at five seconds. The zero-second observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume but, instead, observe the plume briefly at zero seconds and then again at five seconds.

(d) Step 4: Record the OPACITY observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average opacity of EMISSIONS for a 5-second period.

While it is not required by the test method, EPA recommends that the observer estimate the size of vehicles which generate dust plumes for which readings are taken (e.g., mid-size passenger car or heavy-duty truck) and the approximate speeds the vehicles are traveling when readings are taken.

(e) Step 5: Repeat Step 3 (Subsection 92.4.1.1(c) of this Regulation) and Step 4 (Subsection 92.4.1.1 (d) of this Regulation) until you have recorded a total of 12 consecutive OPACITY readings. This will occur once six vehicles have driven on the source in your line of observation for which you are able to take proper readings. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.

(f) Step 6: Average the 12 opacity readings together. If the average OPACITY reading equals 20% or lower, the source is in compliance with the opacity standard described in Section 92 of these Regulations.

92.4.1.2 **Silt Content Test Method**: The purpose of this test method is to estimate the silt content of the trafficked parts of UNPAVED PARKING LOTS. The higher the silt content, the greater the amount of fine dust particles that are entrained into the atmosphere when cars and trucks drive on UNPAVED PARKING LOTS.

(a) Equipment:

(1) A set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm and 0.25 mm, a lid, and collector pan

(2) A small whiskbroom or paintbrush with stiff bristles and dustpan 1 foot in width (the broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length).

(3) A spatula without holes

(4) A small scale with half ounce increments (e.g. postal/ package scale)

(5) A shallow, lightweight container (e.g. plastic storage container)

(6) A sturdy cardboard box or other rigid object with a level surface

(7) A basic calculator

(8) Cloth gloves (optional for handling metal sieves on hot, sunny days)

(9) Sealable plastic bags (if sending samples to a laboratory)

(10) A pencil/pen and paper

(b) Step 1: Look for a routinely traveled surface, as evidenced by tire tracks (only collect samples from surfaces that are not damp due to precipitation or dew). This statement is not meant to be a standard in itself for dampness where watering is being used as a Control Measure. It is only intended to ensure that surface testing is done in a representative manner. Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you reach a hard, underlying subsurface that is greater than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1 cm. In order to confirm that samples are collected to 1 cm in depth, a wooden dowel or other similar narrow object at least one foot in length can be laid horizontally across the survey area while a metric ruler is held perpendicular to the dowel.

- At this point, you can choose to place the sample collected into a plastic bag or container and take it to an independent laboratory for silt content analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.

(c) Step 2: Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it. Transfer the entire sample collected in the dustpan to

the container, minimizing escape of dust particles. Weigh the sample and record its weight.

(d) Step 3: Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

(e) Step 4: Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush (on windy days, use the trunk or door of a car as a wind barricade). Cover the stack with a lid. Lift up the sieve stack and shake it vigorously up, down and sideways for at least 1 minute.

(f) Step 5: Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g., material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size. If this is not the case, restack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute (you only need to reassemble the sieve(s) that contain material, which requires further sifting).

(g) Step 6: After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container originally used to collect and weigh the entire sample. Take care to minimize escape of dust particles. You do not need to do anything with material captured in the sieves; only the collector pan. Weigh the container with the material from the collector pan and record its weight.

(h) Step 7: If the source is an unpaved road, multiply the resulting weight by 0.38. If the source is an UNPAVED PARKING LOT, multiply the resulting weight by 0.55. The resulting number is the estimated silt loading. Then, divide by the total weight of the sample you recorded earlier in Step 2 (Subsection 92.4.1.2(c) of this Regulation) and multiply by 100 to estimate the percent silt content.

(i) Step 8: Select another two routinely traveled portions of the unpaved road or UNPAVED PARKING LOT and repeat this test method. Once you have calculated the silt loading and percent silt content of the 3 samples collected, average your results together.

(j) Step 9: Examine Results. If the average silt loading is less than 0.33 oz/ft², the surface is stable. If the average silt loading is greater than or equal to 0.33 oz/ft², then proceed to examine the average percent silt content. If the source is an UNPAVED PARKING LOT and the average percent silt content is 8% or less, the surface is stable. If your field test results are within 2% of the standard (for example, 6%-10% silt content on an UNPAVED PARKING LOT), it is recommended that you collect 3 additional samples from the source according to Step 1 (Subsection 92.4.1.2(b) of this Regulation) and take them to an independent laboratory for silt content analysis.

(k) Independent Laboratory Analysis: You may choose to collect 3 samples from the source, according to Step 1 (Subsection 92.4.1.2(b) of this Regulation), and send them to an independent laboratory for silt content analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is:

"Procedures For Laboratory Analysis Of Surface/Bulk Loading Samples", (Fifth Edition, Volume I, Appendix C.2.3 "Silt Analysis", 1995), AP-42, Office of Air Quality Planning & Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina

APPENDIX G

Air Quality Regulations

Section 93

Fugitive Dust from Paved Roads and
Street Sweeping Equipment

SECTION 93 - FUGITIVE DUST FROM PAVED ROADS AND STREET SWEEPING EQUIPMENT

93.1 **FUGITIVE DUST From PAVED Roads and Street Sweeping Equipment**

93.1.1 **Purpose:** To limit the EMISSION of PARTICULATE MATTER into the AMBIENT AIR from PAVED roads and PAVED alleys.

93.1.2 **Applicability:** The provisions of this Regulation shall apply to PAVED roads and PAVED alleys which are located in the PM_{10} NONATTAINMENT AREA (HYDROGRAPHIC BASIN 212). Nothing in Subsections 93.1 through 93.4 of these Regulations shall be construed to prevent enforcement of Section 40 (Prohibition of NUISANCE Conditions) of these Regulations. The provisions of this Regulation shall not apply to non-commercial and non-institutional private driveways.

93.1.3 **Effective Date Of This Regulation**: Regulations 93.1 through 93.4, adopted by the District Board of Health of Clark County on June 22, 2000, shall be effective on January 1, 2001.

93.2 **Requirements:**

93.2.1 **PAVED Road Development Standards:** OWNERS AND/OR OPERATORS having jurisdiction over, or ownership of, public or private PAVED roads shall construct, or require to be constructed, all new or modified PAVED roads in conformance with the width of shoulders and median shoulders as specified below:

93.2.1.1 New CONSTRUCTION, MODIFICATION, or approvals of PAVED roads shall be constructed with a PAVED travel section, and four (4) feet of PAVED or stabilized shoulder on each side of the PAVED travel section. The four (4) feet of shoulder shall be PAVED or stabilized with a dust palliative or gravel to prevent the trackout of mud and dirt to the PAVED section. Where shoulder stabilization is used in place of PAVING, the stabilized shoulders must be

maintained in compliance with the stabilization standards set forth in Subsection 93.2.1.5 of this Regulation.

93.2.1.2 Where curbing is constructed adjacent to and contiguous with the travel lane or PAVED shoulder of a road, the shoulder width design standards specified in Subsection 93.2.1.1 shall not be applicable.

93.2.1.3 The PAVED shoulder width requirements set forth in subsection 93.2.1.1 are not applicable at intersections or where auxiliary entry and exit lanes are constructed adjacent to and contiguous with the roadway.

93.2.1.4 Where PAVED roads are constructed, or modified with medians, the medians shall be constructed as set forth below. If the median is located in a limited access freeway right-of-way, then the requirements of Section 90 apply.

(a) With curbing, or

(b) With solid PAVING across the median, or

(c) Apply DUST PALLIATIVES, in compliance with the stabilization standards set forth in Subsection 93.2.1.5 of this Regulation, or

(d) With materials that prevent the trackout of mud and dirt to the PAVED section such as landscaping or decorative rock.

93.2.1.5 **Stabilization Standards:** For the purpose of this rule, CONTROL MEASURES shall be considered effectively implemented when stabilization observations for FUGITIVE DUST EMISSIONS from PAVED roads, shoulders and medians do not exceed 20% OPACITY and do not equal or exceed 0.33 oz/ft^2 silt loading, as determined by Subsection 93.4.1 (Test Methods-Stabilized PAVED Road Shoulders and Medians) of these regulations, except for unpaved shoulders on which gravel has been applied under the provisions of Subsection 93.2.1.1. Where gravel is utilized to prevent trackout from PAVED road unpaved shoulders pursuant to Subsection 93.2.1.1, surface gravel shall be uniformly applied and maintained to a depth of two (2) inches on the required road shoulder.

93.2.1.6 **Requirements For Existing Nonconforming PAVED Roads:** OWNERS AND/OR OPERATORS having jurisdiction over, or ownership of, existing public or private PAVED roads which do not conform with the requirements of Subsections 93.2.1.1 through 93.2.1.5 of this Regulation, shall reconstruct, or require to be reconstructed, the existing nonconforming PAVED road within 365 calendar days following the initial discovery that the road fails to meet

the requirements set forth in Subsections 93.2.1.1 through 93.2.1.5 of these Regulations. The CONTROL OFFICER may require short-term stabilization of any PAVED road subject to the requirements set forth in Subsections 93.2.1.1 through 93.2.1.5 of these Regulations.

93.2.2 **Street Sweeper Requirements:** After January 1, 2001, any OWNER AND/OR OPERATOR which utilizes street sweeping equipment or street sweeping services for street sweeping on PAVED roads or PAVED parking lots, shall acquire or contract to acquire or only certified PM_{10}-efficient street sweeping equipment.

93.2.2.1 **PM_{10}-Efficient Street Sweepers:** For the purposes of Subsection 93.2.3 of this Regulation, a PM_{10}-efficient street sweeper is a street sweeper which has been certified by the South Coast Air Quality Management District (California) (SCAQMD) to comply with the District's performance standards set forth in SCAQMD Rule 1186 utilizing the test methods set fourth in SCAQMD Rule 1186, Appendix A.

93.3 **Record Keeping And Reporting Requirements**

93.3.1 **Record Keeping:** Any PERSON subject to the requirements of this Regulation shall compile and retain records that provide evidence of CONTROL MEASURE application, by indicating type of treatment or CONTROL MEASURE, extent of coverage, and date applied. The records and supporting documentation shall be made available to the CONTROL OFFICER within 24 hours from written or verbal request.

93.3.2 **Reporting Requirements:** OWNERS AND/OR OPERATORS having jurisdiction over PAVED roads shall prepare and submit a written report to the Air Quality District documenting compliance with the provisions of this Regulation. This report shall be prepared annually on a calendar year basis. The reports shall be transmitted no later than 90 days after the end of the calendar year and shall include:

93.3.2.1 The total miles of PAVED roads under the jurisdiction of the OWNER AND/OR OPERATOR and the miles of PAVED roads constructed or modified during the reporting period.

93.3.2.2 For newly constructed or modified roads, documentation on how the requirements of Subsections 93.2.1.1 through 93.2.1.6 have been met.

93.3.2.3 Other information which may be needed by the CONTROL OFFICER for compliance with EPA requirements for enforcement of this regulation.

93.3.3 **Records Retention:** Copies of the records required by Subsection 91.3.1 (Record Keeping Requirements) of this Regulation shall be retained for at least one year.

93.4 **Test Methods**

93.4.1 **Stabilization Test Methods For Stabilized PAVED Road Shoulders And Medians:**

93.4.1.1 **OPACITY Test Method:** The purpose of this test method is to estimate the percent OPACITY of FUGITIVE DUST plumes caused by vehicle movement on stabilized PAVED road shoulders and medians. This method can only be conducted by an individual who has received certification as a qualified observer.

(a) Step 1: Stand at least 16.5 feet from the FUGITIVE DUST source in order to provide a clear view of the EMISSIONS with the sun oriented in the 140-degree sector to the back. Following the above requirements, make OPACITY observations so that the line of vision is approximately perpendicular to the dust plume and wind direction. If multiple plumes are involved, do not include more than one plume in the line of sight at one time.

(b) Step 2: Record the FUGITIVE DUST source location, source type, method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the FUGITIVE DUST source. Also, record the time, estimated distance to the FUGITIVE DUST source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position to the FUGITIVE DUST source, and color of the plume and type of background on the visible EMISSION observation form both when OPACITY readings are initiated and completed.

(c) Step 3: Make OPACITY observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make OPACITY observations approximately 1 meter above the surface from which the plume is generated. Note that the observation is to be made at only one visual point upon generation of a plume, as opposed to visually tracking the entire length of a dust plume as it is

created along a surface. Make two observations per vehicle, beginning with the first reading at zero seconds and the second reading at five seconds. The zero-second observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume but, instead, observe the plume briefly at zero seconds and then again at five seconds.

(d) Step 4: Record the OPACITY observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average OPACITY of EMISSIONS for a 5-second period. While it is not required by the test method, EPA recommends that the observer estimate the size of vehicles which generate dust plumes for which readings are taken (e.g. mid-size passenger car or heavy-duty truck) and the approximate speeds the vehicles are traveling when readings are taken.

(e) Step 5: Repeat Step 3 (Subsection 93.4.1.1(c) of this Regulation) and Step 4 (Subsection 93.4.1.1 (d) of this Regulation) until you have recorded a total of 12 consecutive OPACITY readings. This will occur once six vehicles have driven on the source in your line of observation for which you are able to take proper readings. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.

(f) Step 6: Average the 12 OPACITY readings together. If the average OPACITY reading equals 20% or lower, the source is in compliance with the OPACITY standard described in Section 93 of these Regulations.

93.4.1.2 **SILT LOADING TEST METHOD:** The purpose of this test method is to estimate the silt loading of the trafficked parts of stabilized PAVED road shoulders and medians. The higher the silt loading, the greater the amount of fine dust particles that are entrained into the atmosphere when cars and trucks drive on PAVED roads, shoulders and medians.

(a) Equipment:

(1) A set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm and 0.25 mm (or a set of standard/commonly available sieves), a lid, and collector pan

(2) A small whisk broom or paintbrush with stiff bristles and dustpan 1 foot in width (the broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length)

(3) A spatula without holes

(4) A small scale with half ounce increments (e.g., postal/ package scale)

(5) A shallow, lightweight container (e.g., plastic storage container)

(6) A sturdy cardboard box or other rigid object with a level surface

(7) A basic calculator

(8) Cloth gloves (optional for handling metal sieves on hot, sunny days)

(9) Sealable plastic bags (if sending samples to a laboratory)

(10) A pencil/pen and paper

(b) Step 1: Look for a routinely traveled surface, as evidenced by tire tracks. [Only collect samples from surfaces that are not damp due to precipitation or dew. This statement is not meant to be a standard in itself for dampness where watering is being used as a CONTROL MEASURE. It is only intended to ensure that surface testing is done in a representative manner.] Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you reach a hard, underlying subsurface that is greater than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1 cm. In order to confirm that samples are collected to 1 cm. in depth, a wooden dowel or other similar narrow

object at least one foot in length can be laid horizontally across the survey area while a metric ruler is held perpendicular to the dowel.

- At this point, you can choose to place the sample collected into a plastic bag or container and take it to an independent laboratory for silt loading analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.

(c) Step 2: Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it.

(d) Step 3: Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

(e) Step 4: Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush, (on windy days, use the trunk or door of a car as a wind barricade). Cover the stack with a lid. Lift up the sieve stack and shake it vigorously up, down and sideways for at least 1 minute.

(f) Step 5: Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g., material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size. If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute (you only need to reassemble the sieve(s) that contain material, which requires further sifting).

(g) Step 6: After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container calibrated on the scale in Step 2 (Subsection 93.4.1.2(c)). Take care to minimize escape of dust particles. You do not need to do anything with material captured in the sieves; only the collector pan. Weigh the container with the material from the collector pan and record its weight.

(h) Step 7: Multiply the resulting weight by 0.38. The resulting number is the estimated silt loading.

(i) Step 8: Select another two routinely traveled portions of the unpaved road shoulder or median and repeat this test method. Once you have calculated the silt loading of the 3 samples collected, average your results together.

(j) Step 9: Examine Results. If the average silt loading is less than 0.33 oz/ft^2, the surface is stable.

(k) Independent Laboratory Analysis: You may choose to collect 3 samples from the source, according to Step 1 (Subsection 93.4.1.2 (b) of this Regulation), and send them to an independent laboratory for silt loading analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is:

> "Procedures For Laboratory Analysis Of Surface/Bulk Loading Samples", (Fifth Edition, Volume I, Appendix C.2.3 "Silt Analysis", 1995), AP-42, Office of Air Quality Planning & Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina

APPENDIX G

Air Quality Regulations

Section 94
Permitting and Dust Control for
Construction Activities

SECTION 94 – PERMITTING AND DUST CONTROL FOR CONSTRUCTION ACTIVITIES

94.1 **Purpose**

To limit the EMISSION of PARTICULATE MATTER into the AMBIENT AIR by preventing, controlling, and mitigating FUGITIVE DUST from CONSTRUCTION ACTIVITIES.

94.1.1 To establish FUGITIVE DUST control standards for Clark County, define reasonable precautions for the prevention and control of FUGITIVE DUST from all CONSTRUCTION ACTIVITIES and to establish thresholds for enforcement of these standards.

94.2 **Applicability**

94.2.1 All activities related to CONSTRUCTION that disturb or have the potential to disturb soils and cause FUGITIVE DUST shall be required to control dust EMISSIONS and shall require a Dust Control Permit and, if applicable, a Dust Mitigation Plan. This Regulation shall not apply to operation of sources permitted under Section 12 and Section 16 of the Air Quality Regulations but shall apply to any CONSTRUCTION ACTIVITIES that occur at such facilities.

For the purpose of this Regulation, CONSTRUCTION ACTIVITIES include, but are not limited to, the following practices:

(a) Land clearing, maintenance, and land cleanup using machinery

(b) soil and rock excavation or removal;

(c) soil or rock hauling;

(d) soil or rock crushing or screening;

(e) filling, compacting, stockpiling and grading;

(f) explosive blasting;

(g) demolition;

(h) implosion;

(i) handling of building materials capable of entrainment in air (e.g., sand, cement powder);

(j) abrasive blasting;

(k) concrete, stone, and tile cutting;

(l) mechanized trenching;

(m) initial landscaping;

(n) operation of motorized machinery; and

(o) driving vehicles on CONSTRUCTION sites, in staging and parking areas, in material storage areas; or, on any access routes leading to or from CONSTRUCTION sites.

94.2.2 **Effective Date Of This Regulation:** Regulations 94.1 through 94.9, adopted by the District Board of Health of Clark County on June 22, 2000, shall be effective on January 1, 2001.

94.3 **BEST MANAGEMENT PRACTICES**

94.3.1 **Section 94 Handbook:**

That certain document, three copies of which are on file in the office of the District Board of Health of Clark County, being marked and designated as the "Section 94 Handbook" dated the 24th day of August 2000, together with all tables of contents, definitions, articles, tables, indexes, examples and appendices, is adopted and made part of this Regulation 94, as if it were fully set forth herein, except as amended by this Regulation 94.

94.3.1.1 The Section 94 Handbook describes BEST MANAGEMENT PRACTICES for preventing and controlling dust in connection with CONSTRUCTION ACTIVITIES.

94.3.1.2 Dust Control Permits issued under Subsection 94.4 of these Regulations shall include as a permit requirement, implementation of appropriate dust CONTROL MEASURES from the Section 94 Handbook for each CONSTRUCTION ACTIVITY for which the permit is issued. Other CONTROL MEASURES that is as stringent as or more stringent than the CONTROL MEASURES contained in the Section 94 Handbook may be implemented with the approval of the CONTROL OFFICER.

94.4 General Requirements

94.4.1 Permits Required:

Prior to engaging in any CONSTRUCTION ACTIVITIES defined in Subsection 94.2 of these Regulations, the property OWNER, developer, prime contractor, or authorized agent shall obtain a Dust Control Permit from the Clark County HEALTH DISTRICT.

94.4.2 Exemptions to Permit Requirements:

Where Dust Control Permits are not required under this Subsection, the OWNER AND/OR OPERATOR of the CONSTRUCTION ACTIVITY must employ BEST MANAGEMENT PRACTICES for controlling dust to the extent necessary to comply with the standards set forth in Subsection 94.6 of these Regulations. The following activities shall not require a Dust Control Permit:

(a) NORMAL FARM CULTURAL PRACTICES and existing equestrian facilities in compliance with zoning requirements;

(b) landscaping by a person at his place of residence;

(c) EMERGENCY maintenance activities conducted by government agencies on publicly maintained roads, road shoulders, right-of-ways and on public flood control facilities;

(d) EMERGENCY maintenance activities conducted by any government agency or utility in order to prevent public injury or restore critical utilities to functional status; or,

(e) CONSTRUCTION ACTIVITIES on sites that total less than 0.25 (one quarter) acre in size, trenching projects less than 100 feet in length and demolitions less than 1000 square feet.

94.4.3 **Permit Applications:**

94.4.3.1 Applications for Dust Control permits can be obtained from the Clark County Health District, Air Quality Division, 625 Shadow Lane, Las Vegas, Nevada 89106, and shall be filed with the CONTROL OFFICER.

94.4.3.2 Each application must be accompanied by payment of a fee in accordance with the Regulation listed in Subsection 18.3.

94.4.3.3 Public agency maintenance projects (not CONSTRUCTION projects) may be eligible for waived permit fees upon approval from the CONTROL OFFICER.

94.4.3.4 All applications for Dust Control Permits issued under the provisions of Section 94 shall include, at a minimum, all the information required by the Section 94 Handbook, as applicable.

94.4.4 **Dust Control Permit Stipulations:**

94.4.4.1 Any Dust Control Permit is to be granted subject to the right of inspection of such affected land and determination by the CONTROL OFFICER of any present or potential FUGITIVE DUST or particulate problems. The permit shall be granted subject to, but not limited to, the following conditions:

(a) The applicant is responsible for ensuring that the contractor(s) and/or subcontractor(s), and all other persons abide by the conditions of the permit; and,

(b) The applicant is responsible for supplying complete copies of the Dust Control Permit and Dust Mitigation Plan, if applicable, to all project subcontractors.

94.4.5 **Signage Requirements:**

94.4.5.1 For each Dust Control Permit aggregating more than 0.25 (one-quarter) acre up to and equal to ten (10) acres, or for trenching

projects between 100 feet and one (1) mile in length, or for demolition of a structure totaling over 1,000 square feet, the applicant shall install a sign on said property prior to commencing CONSTRUCTION ACTIVITY that is visible to the public and measures, at minimum, four (4) feet wide by four (4) feet high, conforming to District policy on Dust Control Permit Design and Posting of Signage.

94.4.5.2 For each Dust Control Permit aggregating over ten (10) acres, or for trenching projects aggregating one (1) mile or greater in length, the applicant shall install a sign on said property prior to commencing CONSTRUCTION ACTIVITY and visible to the public and measures, at minimum, eight (8) feet wide by four (4) feet high, conforming to District policy on Dust Control Permit Design and Posting of Signage.

94.4.5.3 Projects shorter than two weeks in duration may request a waiver of the requirement of posting a Dust Control Permit Sign.

94.4.5.4 Public agency maintenance projects, as specified in Subsection 94.4.3.3, performed under the provisions of a Dust Control Permit shall not be required to post a sign.

94.4.6 The permittee's signature or that of the authorized agent on the Dust Control Permit shall constitute agreement by the permittee to accept responsibility for meeting the conditions of the permit.

94.4.7 Requirements and conditions of the Dust Control Permit shall be made a part of the specifications of the CONSTRUCTION contract between the OWNER and prime contractor and contracts between the prime contractor and applicable subcontractors. Both the CONSTRUCTION contract between the OWNER and prime contractor and prime contractor and applicable subcontractors must provide a monetary allowance for any dust control options specified in either the Dust Control Permit or, if applicable, the Dust Mitigation Plan. The amount of the allowance may be specified either by the OWNER, competitively bid, or negotiated by and amongst the parties.

94.4.8 A Dust Control Permit with specified control options selected by the permittee from the Section 94 Handbook shall be required for soil disturbing or CONSTRUCTION ACTIVITIES greater than 0.25 (one-quarter) acre, mechanized trenching greater than 100 feet in length, or for mechanical demolition of any structure larger than 1,000 square feet. Smaller individual, but contractually related projects, that

cumulatively meet these size requirements are also required to obtain a Dust Control Permit. BEST MANAGEMENT PRACTICES shall be selected upon the basis of site-specific project conditions and logistics.

94.4.9 A Dust Control Permit based on a site-specific Dust Mitigation Plan approved by the CONTROL OFFICER shall be required for all soil disturbing or CONSTRUCTION projects 10 acres or greater in size, trenching activities one mile or greater in length, or for structure demolition using implosive or explosive blasting techniques. The required site-specific Dust Mitigation Plan shall incorporate BEST MANAGEMENT PRACTICES for all CONSTRUCTION ACTIVITIES at minimum, and shall become part of the Dust Control Permit as an enforceable permit condition.

94.4.10 A Dust Control Permit based on specific CONTROL MEASURES shall be required for routine, public agency road maintenance, road shoulder maintenance, flood control facility maintenance, and maintenance activities that disturb soil and are capable of causing FUGITIVE DUST. Such Dust Control Permits may be issued based upon written monthly, quarterly, semi-annual, or annual schedules of work for routine maintenance activities. Such permits shall include conditions that require BEST MANAGEMENT PRACTICES for dust control of permitted activities. Public agencies must quantify miles and acres of maintenance activities to be performed under the conditions of the Dust Control Permit.

94.4.11 Any CONSTRUCTION project having more than 50 acres of actively disturbed soil at any given time shall be required by the CONTROL OFFICER to have in place a person (dust control monitor) with full authority to ensure that dust CONTROL MEASURES are implemented, including inspections, record keeping, deployment of resources, and shut-down or modification of CONSTRUCTION ACTIVITIES as needed. Monitoring of project conditions shall be conducted at all times and the person must devote the majority of the time specifically to managing dust prevention and control on the site. The requirement for dust control monitor shall lapse when the acreage of actively disturbed soil drops below 50 acres and the previously disturbed areas have been stabilized in accordance with the requirements of these Regulations. A dust control monitor shall be considered qualified when he/she has the minimum qualifications as follows: successful completion of the Basic Dust Control Class, successful completion of

the Dust Monitor Class and two years of experience in the CONSTRUCTION industry. Any person acting in the capacity of a dust control monitor shall attend the Dust Monitor Class at least once every three years.

94.5 General Standards

94.5.1 All permittees, contractors, OWNERS, Operators, or other persons involved in CONSTRUCTION ACTIVITIES must employ Best Available CONTROL MEASURES (BACM) as set forth in the Section 94 Handbook to prevent particulate matter from becoming airborne. BACM are defined as follows:

(a) All CONTROL MEASURES required by Air Quality Regulations;

(b) All CONTROL MEASURES required by the approved dust mitigation plan or Dust Control Permits. If the site is not permitted, the BEST MANAGEMENT PRACTICES set forth in the Section 94 Handbook for the subject activities shall be applicable;

(c) All CONTROL MEASURES prescribed by the CONTROL OFFICER in a Corrective Action Order (CAO).

94.5.2 One or a combination of the following methods must be used to maintain dust control on all disturbed soil to minimize particulate emissions:

(a) The soil must be maintained in a sufficiently damp condition to prevent visible FUGITIVE DUST EMISSIONS that exceed 20% OPACITY as set forth in Section 94.9, or prevent any dust plume from extending more than 100 yards, horizontally or vertically, from the point of origin; or

(b) The soil must be crusted over by water or other appropriate methods, as demonstrated by the Drop Ball/Steel Ball Test (Subsection 94.9.3); or

(c) The soil must be covered with clean gravel or treated with a DUST SUPPRESSANT.

94.5.3 No person shall cause or permit the handling, transporting, or storage of any material in a manner that allows visible FUGITIVE DUST

EMISSIONS to exceed 20% OPACITY as set forth in Subsection 94.9.2 of these Regulations.

94.5.4 Throughout each CONSTRUCTION site and for the duration of the CONSTRUCTION project, all disturbed soil must be maintained to minimize wind erosion and particulate emissions. BACM are required 24 hours a day, 7 days a week, whether or not there is current CONSTRUCTION ACTIVITY on site.

94.5.5 In the event that wind conditions occur that cause FUGITIVE DUST EMISSIONS to exceed 20% OPACITY in spite of the use of Best Available CONTROL MEASURES, all CONSTRUCTION ACTIVITIES that may contribute to these particulate emissions must immediately cease. Water trucks and water pulls shall continue to operate under these circumstances, unless wind conditions are such that the continued operation of watering equipment cannot reduce FUGITIVE DUST EMISSIONS or that continued equipment operation poses a safety hazard.

94.5.6 Abrasive blasting must limit visible emissions to no more than an average of 40% OPACITY for any period aggregating 3 minutes in any 60-minute period.

94.5.7 The responsibility to maintain dust control remains until the CONSTRUCTION site is completely stabilized by landscaping, paving, application and maintenance of a DUST PALLIATIVE, or other effective, long-term, final stabilization. Where a CONSTRUCTION site or part thereof will become inactive for a period of 30 days or longer, long-term stabilization shall be implemented within 10 days following the cessation of active operations.

94.5.8 The permit holder shall notify the HEALTH DISTRICT in writing within 10 days following the cessation of active operations on all or part of a CONSTRUCTION site or upon the completion of a CONSTRUCTION project.

94.6 **Enforcement Standards**

94.6.1 Where a land OWNER, developer, or prime contractor receives three (3) violations approved by the CONTROL OFFICER, HEARING OFFICER, or HEARING BOARD within the previous 180 days, the CONTROL OFFICER shall require the posting of a surety bond to insure

implementation of the mitigation measures set forth in the approved dust control mitigation plan and Dust Control Permit. The surety bond must be executed by the applicant in a form acceptable to the CONTROL OFFICER for the permit as the principal with a corporation authorized to transact surety business in the State of Nevada, and shall be conditioned upon faithful performance of all other conditions of the permit and faithful compliance with the provisions of these Regulations. The amount of each bond required by this section shall be equivalent to the estimated cost of implementing the dust CONTROL MEASURES set forth in the approved dust control mitigation plan or Dust Control Permit plus an additional 10% of the estimated cost to cover contingencies.

94.6.2 Anyone engaging in CONSTRUCTION ACTIVITIES shall be subject to the permit conditions outlined in the Dust Control Permit for that specific project. Non-fulfillment of any condition set forth in the permit shall be in violation of this Section.

94.6.3 If a permittee has received three Notices of Violation at the same project for which the Dust Control Permit was issued, the CONTROL OFFICER or his representative may suspend or revoke the permit. Upon suspension or revocation of a permit, that work which gives rise to violation to the terms of the permit will cease. The CONTROL OFFICER shall post notices of suspension or revocation conspicuously on the property involved. The notice shall state the reasons and indicate the date and time of suspension and/or revocation. The suspension or revocation will remain in effect until such time as rescinded by the CONTROL OFFICER and a new permit is issued upon payment of a fee in accordance with Section 18, provided that the permittee shall have a right to hearing before the HEARING BOARD within five (5) working days from date of issuance of the suspension or revocation. Alternatively, in such instances, the CONTROL OFFICER may require compliance with Subsection 94.7 for all Operators of earth moving or soil disturbing equipment. For the purposes of this Subsection, a corrective action order and notice of violation issued contemporaneously for the same violation shall be considered as one action.

94.6.4 Permits will not be issued to an applicant having outstanding unpaid penalties not under appeal imposed by the Air Quality HEARING BOARD or HEARING OFFICER.

94.6.5 Any person aggrieved by a decision of the CONTROL OFFICER pursuant to this section may appeal to the HEARING BOARD as provided in Section 7 of these Regulations.

94.6.6 CONSTRUCTION site workers, equipment Operators, and CONSTRUCTION site supervisors and foremen may be required to attend a Dust Control Class as a remedial or corrective measure.

94.6.7 The following circumstances constitute failure to comply with the Dust Control Permit requirements of the Clark County HEALTH DISTRICT Air Quality Division:

(a) Failure to obtain an approved Dust Control Permit before engaging in activities that disturb or have the potential to disturb soils and cause FUGITIVE DUST to enter the air.

(b) Failure by an OWNER or a permittee to include in his CONSTRUCTION contract with his prime contractor a monetary allowance for any dust control options specified in either the Dust Control Permit or, if applicable, the Dust Mitigation Plan.

(c) Failure by the permit holder to include in his CONSTRUCTION contracts with his subcontractors a monetary allowance for any applicable dust control options specified in either the Dust Control Permit, or, if applicable, the Dust Mitigation Plan.

(d) Conducting a CONSTRUCTION ACTIVITY as defined by Section 94.2 for which no specified control option is indicated in the approved Dust Control Permit or, if applicable, the Dust Mitigation Plan.

(e) Failure to perform any duty to allow or carry out an inspection, entry, or monitoring activity required by Air Quality Division.

94.6.8 The following circumstances constitute failure to fully employ Best Available CONTROL MEASURES:

(a) Failure to employ any Best Management Practice as described in the Section 94 Handbook and included in an approved Dust Control Mitigation Plan or as a Dust Control Permit condition.

(b) Performing any CONSTRUCTION ACTIVITY that creates a visible plume of dust that extends more than 100 yards from the point of origin.

(c) Failure to immediately clean up mud or dirt that is tracked out onto a PAVED road and that extends a cumulative distance of 50 feet or more from the point of origin within one hour of discovery and failure to clean up trackout that extends less than 50 cumulative feet from the point of origin by the end of the work day or evening shift, as applicable.

(d) Performing any CONSTRUCTION ACTIVITY that creates a visible plume of dust exceeding 20% OPACITY as evaluated according to test method "Visual Determination of OPACITY of EMISSIONS from FUGITIVE DUST EMISSION Sources for Time-Averaged Regulations" (Subsections 94.9.1 and 94.9.2).

(e) Performing any abrasive blasting that creates a visible plume of dust exceeding 40% OPACITY as evaluated according to test method "Visual Determination of OPACITY of EMISSIONS from FUGITIVE DUST EMISSION Sources for Time–Averaged Regulations" (Subsections 94.9.1 and 94.9.2).

(f) Failure to maintain project soils with adequate soil moisture to prevent wind erosion as measured by a test method approved in writing by the CONTROL OFFICER and the Administrator of the EPA.

(g) Failure to maintain project soils with adequate surface crusting or protection to prevent wind erosion as measured by test method "Soil Crust Determination (The Drop Ball Test)" (Subsection 94.9.3), or alternative test method approved in writing by the CONTROL OFFICER and the Administrator of the EPA.

(h) Failure to comply with any record keeping or miscellaneous requirements of this Section.

(i) Failure to maintain project haul routes or haul roads in a stable condition as measured by the test methods outlined in Section 91.4.

94.6.9 **Corrective Action Orders And Notices of Violation:**

94.6.9.1 If loose soil, dust, or dust particles are found to exist at the site of a CONSTRUCTION ACTIVITY, or if visible dust emissions are observed in any quantity, the CONTROL OFFICER may issue a Corrective Action Order to any permittee, OWNER, developer, contractor, or other

person that said situation may be in violation of these regulations and is to be corrected within a specified period of time, dependent upon the scope and extent of the problem.

94.6.9.2 The failure to comply with corrective measures of a Corrective Action Order within the specified period of time shall be a violation of this section.

94.6.9.3 The CONTROL OFFICER may issue a Notice of Violation upon determination that the OWNER AND/OR OPERATOR is out of compliance with Subsections 94.6.7 and 94.6.8, a Dust Mitigation Plan (if applicable), or upon the failure to comply with a previously issued CAO.

94.6.9.4 The CONTROL OFFICER, his designated agent, or any other authorized representative of the CLARK COUNTY HEALTH DISTRICT, after due notice shall be further empowered to enter upon any said land where any sand or dust problem exists, and to take such remedial and corrective action as may be deemed appropriate to cope with and relieve, reduce, or remedy the existent loose soil and dust situation and condition, when the OWNER, Occupant, Operator, or any Tenant, Lessee, or Holder of any possessory interest or right in the involved land fails to do so.

94.6.9.5 Any cost incurred in connection with any such remedial or corrective action by the HEALTH DISTRICT or any person acting for the HEALTH DISTRICT shall remain in full force and effect until any and all such costs have been fully paid.

94.7 Miscellaneous Requirements

94.7.1 Stockpiles located within 100 yards of occupied buildings must not be constructed over 8 feet in height.

94.7.2 Stockpiles over 8 feet high must have a road bladed to the top to allow water truck access or must have a sprinkler irrigation system installed, used and maintained.

94.7.3 The CONSTRUCTION site superintendent or other designated on-site representative of the project developer shall be required to have successfully completed a Clark County HEALTH DISTRICT Dust Control Class.

94.7.4 Water truck and water pull driver(s) for each CONSTRUCTION project shall be required to have successfully completed a Clark County HEALTH DISTRICT Dust Control Class.

94.7.5 All individuals required to attend and successfully complete the Dust Control Class shall do so at least once every three years.

94.8 **Record Keeping**

94.8.1 Records of CONSTRUCTION site self-inspections are to be kept for a minimum of one year or for six months beyond the project duration, whichever is longer (self-inspection records include daily inspections for crusted or damp soil, track out conditions and cleanup measures, daily water usage, DUST SUPPRESSANT application records, etc.).

94.8.2 For CONTROL MEASURES involving chemical or organic soil stabilization, records shall indicate the type of product applied, vendor name, label instructions for approved usage, and the method, frequency, concentration, and quantity of application.

94.9 **Test Methods**

94.9.1 Visual Determination of OPACITY of EMISSIONS from Sources of Visible EMISSIONS.

Applicability: This method is applicable for the determination of the OPACITY of EMISSIONS from sources of visible EMISSIONS for time-averaged regulations. A time-averaged regulation is any regulation that requires averaging visible EMISSION data to determine the OPACITY of visible EMISSIONS over a specific time period.

Principle: The OPACITY of EMISSIONS from sources of visible EMISSIONS is determined visually by an observer who has received certification as a qualified Visible EMISSIONS Evaluator.

Procedures: A qualified Visible EMISSIONS Evaluator shall use the procedures set forth in Subsection 94.9.2 for visually determining the OPACITY of EMISSIONS.

94.9.2 Procedures for FUGITIVE DUST EMISSIONS: These procedures are applicable for the determination of the OPACITY of FUGITIVE DUST

EMISSIONS by a qualified observer. The qualified observer should do the following:

(a) Position: Stand at a position at least 5 meters from the FUGITIVE DUST source in order to provide a clear view of the EMISSIONS with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make OPACITY observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. The observer may follow the FUGITIVE DUST plume generated by mobile earth moving equipment, as long as the sun remains oriented in the 140° sector to the back. As much as possible, do not include more than one plume in the line of sight at one time.

(b) Field Records: Record the name of the site, FUGITIVE DUST source type (e.g., pile, material handling, (e.g., transfer, loading, sorting)), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the FUGITIVE DUST source. Also, record the time, estimated distance to the FUGITIVE DUST source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the FUGITIVE DUST source, and color of the plume and type of background on the visible EMISSION observation from when OPACITY readings are initiated and completed.

(c) Observations: Make OPACITY observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. For storage piles, make OPACITY observations approximately 1 meter above the surface from which the plume is generated. The initial observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume, but instead observe the plume momentarily at 15-second intervals. For FUGITIVE DUST from earthmoving equipment, make OPACITY observations approximately 1 meter above the mechanical equipment generating the plume.

(d) Recording Observations: Record the OPACITY observations to the nearest 5% every 15 seconds on an observational record sheet. Each momentary observation recorded represents the average OPACITY of EMISSIONS for a 15-second period. If a multiple plume exists at the time of an observation, do not record an OPACITY

reading. Mark an “x” for that reading. If the equipment generating the plume travels outside of the field of observation, resulting in the inability to maintain the orientation of the sun within the 140° sector or if the equipment ceases operating, mark an “x” for the 15-second interval reading. Readings identified as “x” shall be considered interrupted readings.

Data Reduction For Time-Averaged Regulations: For each set of 12 or 24 consecutive readings, calculate the appropriate average OPACITY. Sets must consist of consecutive observations, however, readings immediately preceding and following interrupted readings shall be deemed consecutive and in no case shall two sets overlap, resulting in multiple violations.

94.9.3 **Soil Crust Determination (The Drop Ball Test):**

(a) Drop a steel ball with a diameter of 15.9 millimeters (0.625 inches) and a mass ranging from 16-17 grams from a distance of 30 centimeters (one foot) directly above the soil surface. If blowsand is present, clear the blowsand from the surfaces on which the soil crust test method is conducted. Blowsand is defined as thin deposits of loose uncombined grains covering less than 50% of an OPEN AREA OR VACANT LOT that have not originated from the representative surface being tested. If material covers a visible crust, which is not blowsand, apply the test method in Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation to the loose material to determine whether the surface is stabilized.

A sufficient crust is defined under the following conditions: once a ball has been dropped according to Subsection 90.4.1.1 of this Regulation, the ball does not sink into the surface, so that it is partially or fully surrounded by loose grains and, upon removing the ball, the surface upon which it fell has not been pulverized, so that loose grains are visible.

(b) Randomly select each representative disturbed surface for the drop ball test by using a blind “over the shoulder” toss of a throwable object (e.g., a metal weight with survey tape attached). Using the point of fall as the lower left hand corner, measure a 1-foot square area. Drop the ball three times within the 1-foot by 1-foot square survey area, using a consistent pattern across the survey area. The survey area shall be considered to have passed the Soil Crust

Determination Test if at least two out of the three times that the ball was dropped, the results met the criteria in Subsection 90.4.1.1(a) of this Regulation. Select at least two other survey areas that represent a random portion of the overall disturbed conditions of the site, and repeat this procedure. If the results meet the criteria of Subsection 90.4.1.1(a) of this Regulation for all of the survey areas tested, then the site shall be considered to have passed the Soil Crust Determination Test and shall be considered sufficiently crusted.

(c) At any given site, the existence of a sufficient crust covering one portion of the site may not represent the existence or protectiveness of a crust on another portion of the site. Repeat the soil crust test as often as necessary on each portion of the overall conditions of the site using the random selection method set forth in Subsection 90.4.1.1(b) of this Regulation for an accurate assessment.

APPENDIX G

Air Quality Regulations

Section 94

Construction Activities Notebook
including the Section 94 Handbook

CONSTRUCTION ACTIVITIES NOTEBOOK

including the

SECTION 94 HANDBOOK

Clark County District Board of Health
August 24, 2000

TABLE OF CONTENTS

PAGE

Cover Page i
Table of Contents ii
List of Figures iii
Acronyms/Definitions iv

Construction Activities Notebook vi

DCP 01: Permit Application Instructions viii
DCP 02: Dust Control Class xi
DCP 03: Dust Control Permit Signage xii
DCP 04: Dust Control Permit Modifications xiii
DCP 05: Dust Control Permit Closure/Renewal xiv
DCP 06: Dust Control Permit Compliance xv

GEN 01: Phasing xix
GEN 02: Record Keeping xxi
GEN 03: Weather Monitoring xxii

Section 94 Handbook: Best Management Practices for Dust Control 1

CST 01: Backfilling 7
CST 02: Blasting (Abrasive) 9
CST 03: Blasting (Soil and Rock) 11
CST 04: Clearing and Grubbing 14
CST 05: Clearing Forms 16
CST 06: Crushing 17
CST 07: Cut and Fill 18
CST 08: Demolition – Implosion 20
CST 09: Demolition – Mechanical/Manual 22
CST 10: Disturbed Soil 23
CST 11: Disturbed Land - Large Tracts 25
CST 12: Dust Suppressant, Dust Palliative, and Surfactant Selection and Use 26

CST 13: Importing Soil, Rock, and Other Bulk Materials 27
CST 14: Landscaping 28
CST 15: Paving/Subgrade Preparation 30
CST 16: Screening 31
CST 17: Staging Areas 33
CST 18: Stockpiles 35
CST 19: Track-out Prevention 37
CST 20: Traffic - Construction Related 39
CST 21: Trenching 40
CST 22: Truck Loading 43

LIST OF FIGURES

FIGURE 1: Decision Flowchart 3
FIGURE 2: Silt Content vs. Optimum Moisture Content 4
FIGURE 3: Clark County, Nevada - Soil Types 5
FIGURE 4: Las Vegas Valley Soil Types 6

APPENDICES

APPENDIX A: Dust Control Permit Application A-1
APPENDIX B: Dust Control Permit Mitigation Plans B-1
APPENDIX C: Dust Control Permit Design and Posting of Signage C-1
APPENDIX D: Dust Control Permit Supplemental Forms D-1

ATTACHMENTS

ATTACHMENT 1:
Regulations Pertaining to Construction Activity Dust Control Attachment1-1
ATTACHMENT 2:
AQD Dust Suppressant, Palliative, and Surfactant Guidelines ..... Attachment 2-1
ATTACHMENT 3:
California Air Resources Board (CARB)-Approved Abrasives Information ..... Attachment 3-1

ACRONYMS/DEFINITIONS

A complete set of AQD Regulation Definitions (Section 0) is included in Attachment A (Regulations Pertaining to Construction Activity Dust Control) of the Construction Activities Notebook.

AASHTO - American Association of State Highway Transportation Officials

AQD - Clark County Health District, Air Quality Division

ASTM - American Society for Testing and Materials

Bulk material – Any material, including but not limited to, earth, rock, silt, sediment, sand, gravel, soil, fill, aggregate less than 2 inches in length or diameter, dirt, mud, demolition debris, cotton, trash, cinders, pumice, saw dust, feeds, grains, fertilizers, and dry concrete, which are capable of producing fugitive dust at an industrial, institutional, governmental, construction, and/or demolition site.

Control Measure – An action or practice employed to comply with a Control Requirement.

Control Requirement – A summary statement of the regulation requirements pertaining to a particular activity or action.

EPA – Environmental Protection Agency

Freeboard – The distance measured from the top of the side of storage area of a truck to the fill line.

Opacity – A visual measurement of the density of a particulate matter such as soil dust when suspended in air. Opacity is evaluated using specified test methods.

Optimum Soil Moisture Content – The water content at which soil can be compacted to the maximum dry weight by modified compactive effort using ASTM D 1557 for Optimum Soil Moisture Content/Maximum Density.

Palliative – A substance used to lessen the severity of an impact without actually curing or eliminating the impact. The term is used in this document to describe substances other than water that lessen the amount of dust generated.

PEP - Particulate Emission Potential

Silhouette Area – The area of a shadow produced if a light was shown directly from the opposite side of an object.

Stable, and **Stabilized** – Stationary soils are considered stable or stabilized when they are in compliance with the standard set forth per Regulation Section 90.4. Soils that are being actively handled or disturbed by construction related activity or off-road construction traffic and vehicle parking are considered stable or stabilized when they are in compliance with the opacity and plume limitations set forth per Regulation Section 94.5.3.1. Unpaved haul roads are considered stable or stabilized when they are in compliance with standards set forth per Regulation Section 91.2.1.4. Test methods for

stability are expected to be used when necessary, but are not required to be utilized continuously during active construction activity.

Staging area – Any portion of a construction project used for storing materials, parking vehicles, and equipment; may be a separate area from the main construction project area.

Surfactant – A compound or element that reduces the surface tension of a liquid. The term is used in this document to describe wetting and spray adjuvants designed to promote the economical application of water to hydrophobic soils. Surfactants prevent drifting, decrease run-off, increase the penetrating and wetting properties, and promote more even, consistent spray patterns.

Tack coat – An asphaltic material applied as a binder to Type II Aggregate prior to the placement of asphalt during road construction.

Tackifier – A substance mixed with water that binds together mulches, small particles, or other dust palliatives without forming a hard crust. Many dust palliatives, in a more dilute concentration, can be used as tackifiers.

Track-out – Soil on paved roadways deposited from vehicles that have passed from a construction site or from an unpaved access route onto the paved roadway.

Type II Material – Base Aggregate as defined in Section 704 of the Uniform Standards Specifications for Public Works' Construction Off-Site Improvements, Clark County Area, Nevada.

Wheel shaker – A device capable of spreading the tread on tires and shaking the wheels and axles of vehicles for the purpose of releasing mud, soil, and rock from the tires and undercarriage to prevent tracking those materials onto paved surfaces.

Wheel washer – A station or device, either temporary or permanent, that utilizes a bath or spray of water for the purpose of cleaning mud, soil, and rock from the tires and undercarriage of vehicles to prevent tracking those materials onto paved surfaces.

Wobbler - Type of sprinkler head designed to minimize evaporation of water by enhancing the horizontal spray pattern.

INTRODUCTION

The Clark County Health District, Air Quality Division (AQD) regulates construction activities that disturb soil in Clark County, Nevada. A Dust Control Permit for Construction Activities (Dust Control Permit) is required for most soil-disturbing projects.

A valid Dust Control Permit must be obtained before soil is disturbed. Dust Control Permits are valid for one (1) year. If a project continues for more than one year, the permit must be renewed prior to expiration. AQD must be notified within 10 working days after the completion of a project. Each Dust Control Permit application must have a Dust Control Mitigation Plan outlining control measures to prevent fugitive dust. Control measures are based upon soil type and project activities. Soil types are classified based upon particulate emission potential (high, moderate high, moderate low, low, and slight). Guidelines and maps are provided in the Section 94 Handbook located within this Notebook.

Fugitive dust emission violations are strictly enforced. Permittees and contractors are responsible for controlling dust on their projects 24 hours a day, 7 days a week; there are no exceptions. Violators may be required to pay penalties or possibly suspend operations until the fugitive dust is mitigated on the construction sites.

This Construction Activities Notebook provides a guideline for obtaining a Dust Control Permit and developing a Dust Control Mitigation Plan. The Section 94 Handbook portion of the Construction Activities Notebook for dust control measures is included by reference in Section 94 of AQD Regulations. The Construction Activities Notebook has been divided into the following three (3) segments:

(1) GENERAL INFORMATION:
   a. Dust Control Permit Requirements (DCP); and
   b. General Construction Project Activities (GEN).

(2) SECTION 94 HANDBOOK (Board of Health approved):
   a. Soil Particulate Emission Determination Charts and Maps;
   b. Best Management Practices (BMPs) for Construction Dust Control (CST); and
   c. Appendices: A - Dust Control Permit Application, B - Dust Control Permit Mitigation Plans, C - Dust Control Permit Design and Posting of Signage, and D – Dust Control Permit Supplemental Forms.

(3) ATTACHMENTS:

a. Attachment 1 - Regulations Pertaining to Construction Activity Dust Control;

b. Attachment 2 - Dust Suppressant/Palliative/Surfactant Information; and

c. Attachment 3 - California Air Resources Board (CARB)-Approved Abrasives Information.

BMP: DUST CONTROL PERMIT APPLICATION SUMMARY

DCP 01

Dust Control Permit Application Summary

REQUIREMENTS

- Permit required for soil-disturbing projects greater than or equal to 0.25 acres.
- Permit required for demolition of any structure greater than or equal to 1,000 sq. ft.
- Permit required for trenching operations greater than or equal to 100 feet in length.
- Construction BMP *Control Requirements* must be addressed by *Control Measures*
- Construction BMP Control Measures must be followed for every soil disturbing or construction activity.

CONTROL MEASURES

1. A Dust Control Permit is required for projects with the following dimensions:
   a. Soil-disturbing or construction projects greater than or equal to 0.25 acres;
   b. Trenching greater than or equal to 100 feet in length; or
   c. Mechanical demolition of any structure larger than or equal to 1,000 square feet.

2. Dust Control Permits may be issued to the following persons:
   a. Property owner or authorized designee; or
   b. Representative of a municipality that owns the property.

3. Dust Control Permit requirements:
   a. Submit a complete application that includes project vicinity and assessor's parcel maps (see Appendix A: Dust Control Permit Application). Permit applications should be submitted to the AQD offices at PO Box 3902, 625 Shadow Lane, Las Vegas, NV 89127.

b. For soil disturbing or construction projects greater than or equal to 0.25 acres, but less than or equal to 10 acres, a *Dust Mitigation Plan* using the Construction Best Management Practices in the Section 94 Handbook must be submitted. Control Measures must be selected to meet all Control Requirements. Consider project conditions and logistics when identifying and selecting Best Management Practices and Control Measures (see Appendix C: Dust Mitigation Plans).

   A *Site-Specific Dust Control Mitigation Plan* must be submitted for any soil disturbing or construction project greater than ten (10) acres in size; trenching activity more than one (1) mile in length or structural demolition using implosive or explosive techniques (see Appendix C: Dust Control Permit Mitigation Plans). This required plan will incorporate enforceable permit conditions, drawn from Construction Activities Best Management Practices (see Section 94 Handbook), into the Dust Control Permit.

c. Any construction project having more than 50 acres of actively disturbed soil at any given time is required to have a Dust Control Monitor as described in Section 94.4.11.

d. The construction site superintendent(s), foremen or other designated on-site representative(s) of the project developer, as well as the water truck/pull driver(s) for each construction site, are required to successfully complete an AQD Dust Control Class and possess a current Dust Control Card.

4. A Dust Control Permit sign must be conspicuously posted on every construction site (see Appendix B: Dust Control Permit Signage).

5. Copies of the Dust Control Permit, including the Dust Control Mitigation Plan and related maps, must be supplied to all contractors and subcontractors. A complete copy must be kept at the construction site at all times.

BMP: DUST CONTROL PERMIT APPLICATION SUMMARY (continued)

DCP 01

6. Notifications:
   a. Notify AQD of any proposed modifications to the Dust Control Permit, including the Dust Control Mitigation Plan (see Appendix D: Dust Control Permit Supplemental Forms); and,
   b. Inform AQD within 10 working days of project completion and final site stabilization. Submit Application for Dust Control Permit Closure form. (See Appendix D: Dust Control Permit Supplemental Forms).

7. AQD typically issues Dust Control Permits for Construction Activities within 10 working days of receipt of complete application. Adequate time for application processing must be provided. Emergency measures are exempt from permitting requirements, but are not exempt from the application of dust mitigation measures or the use of Best Management Practices.

BMP: DUST CONTROL CLASS

DCP 02

AQD Dust Control Class

REQUIREMENTS

- The construction site superintendent(s), foremen and other designated on-site representative(s) must attend Dust Control Class.
- The water truck/pull driver(s) for each project must attend Dust Control Class.

CONTROL MEASURES

1. The construction site superintendent(s), foremen and other designated on-site representative(s) of the project developer, as well as the water truck/pull driver(s) for each construction site, are required to successfully complete a Clark County Health District, Air Quality Division Dust Control Class or possess a current Dust Control Card.

2. Dust Control Card must be renewed every three (3) years.

3. The content of the Dust Control Class includes information on completing Dust Control Mitigation Plans, health effects of particulates, Clark County regulations, enforcement, and pertinent dust mitigation measures.

4. The Dust Control Class, including a written exam, typically lasts three to four hours. Contact AQD at (702) 383-1276 to register for a class time. Evening and Saturday classes may be arranged through AQD to provide instruction for larger groups. This service is provided to any group, including contractors and subcontractors, wishing to certify more than 15 employees at one time.

BMP: DUST CONTROL PERMIT SIGNAGE

DCP 03

AQD Dust Control Permit Signage

REQUIREMENTS

- The Dust Control Permit sign must be placed in a conspicuous place on the project site prior to commencement of construction activities.
- The "*Dust Control Matters"* and "*Subcontractor"* phone numbers posted on the Dust Control Permit sign must be for a person who can be reached during evening and weekend hours.

CONTROL MEASURES

1. The Dust Control Permit sign must be placed on the project site and must be conspicuous to the public. The "*Dust Control Matters"* and "*Subcontractor"* phone numbers posted on the Dust Control Permit sign must be for a person who can be reached during evening and weekend hours.

2. Each Dust Control Permit aggregating from 0.25 acres up to and equal to 10 acres must install a sign on the property prior to the commencement of construction. This sign must measure, at minimum, four (4) feet wide by four (4) feet high, conforming to AQD policy on Dust Control Permit Design and Posting of Signage (see Appendix B: Dust Control Permit Signage).

3. For each Dust Control Permit aggregating more than 10 acres, a sign must be installed on the property prior to the commencement of construction. This sign must measure, at minimum, eight (8) feet wide by four (4) feet high, conforming to AQD policy on Dust Control Permit Design and Posting of Signage (see Appendix B: Dust Control Permit Signage).

4. Projects less than two (2) weeks in duration may request a waiver of the requirement of posting a Dust Control Permit sign.

BMP: DUST CONTROL PERMIT MODIFICATIONS

DCP 04

Dust Control Permit Modifications

REQUIREMENTS

- Modifications must be made on a Dust Control Permit Modification form and submitted to AQD for approval.
- If the modification is in response to a CAO, this must be noted on the modification form, and the corrective action must take place as directed.

CONTROL MEASURES

1. Modifications to the Dust Control Permit can be made with AQD approval (changes are usually made to the Dust Control Mitigation Plan).

2. A Dust Control Permit Modification application form must be submitted to the AQD (see Appendix D: Dust Control Permit Supplemental Forms).

3. If the parcel changes ownership during the lifetime of a Dust Control Permit, proof of ownership must be provided with a new Dust Control Permit Application.

4. The Dust Control Permit Modification application form must be signed by the permittee or written designee (see Appendix D: Dust Control Permit Supplemental Forms). If a modification is requested for revision of project acreage due to long term stabilization of a portion of a project with a dust palliative, a Dust Palliative Information Form must be included with the modification form (see Appendix D: Dust Control Permit Supplemental Forms).

5. If the modification is in response to a Corrective Action Order (CAO) issued by an Enforcement Officer, this should be noted on the modification form. The corrective action must take place as directed. All other permit requirements remain in effect while the modification is being processed.

BMP: DUST CONTROL PERMIT CLOSURE/ RENEWAL

DCP 05

Dust Control Permit Closure/Renewal

REQUIREMENTS

- Within 10 working days of the completion of the project, the site must be stabilized and a Dust Control Permit Closure form submitted to AQD.
- Dust Control Permits are valid for one (1) year. If a project is not completed in that time, the Dust Control Permit must be renewed.

CONTROL MEASURES

Dust Control Permit Closure

Within 10 working days of the completion of the project, a Dust Control Permit Closure form must be submitted to AQD (see Appendix D: Dust Control Permit Supplemental Forms). A site visit will be conducted to determine if the parcel is properly stabilized. Upon verification of stabilization, the permit will be closed. If the parcel has not been properly stabilized, the permit holder will be notified of the deficiencies with a Corrective Action Order outlining corrective measures and timelines. Another Dust Control Permit Closure form must be submitted and another site visit will be conducted.

Dust Control Permit Renewal

Dust Control Permits are valid for up to one (1) year. If a project will not be completed before the Dust Control Permit expires, the Dust Control Permit must be renewed prior to expiration of the original permit. The same form is used for renewal as for the original application (see Appendix A: Dust Control Permit Application). The number of acres for the renewal will only include those acres that will be disturbed throughout the rest of the project. Acreage that has been verified by AQD to be stable or areas that no longer contain disturbed soil need not be included in the renewal. Unpaved staging areas must still be included in the project acreage submitted for permitting.

BMP: DUST CONTROL PERMIT COMPLIANCE

DCP 06

Dust Control Permit Compliance

REQUIREMENTS

- Comply with all Control Measures as required by AQD regulations.
- Comply with all Control Measures as directed by an Enforcement Officer in a Corrective Action Order.
- Comply with all Control Measures listed in the Dust Control Mitigation Plan of the Dust Control Permit.
- Employ BACM in all phases of construction activities.

CONTROL MEASURES

Section 94 Regulation Overview

1. All permittees, contractors, owners, operators, or other persons involved in construction activities must employ Best Available Control Measures (BACM) as set forth in the Section 94 Handbook to prevent particulate matter from becoming airborne. BACM are defined as follows:

   a. All Control Measures required by AQD regulations.

   b. All Control Measures required by the approved Dust Control Mitigation Plan in the Dust Control Permit. If the site is not permitted, the Construction Best Management Practices set forth in the Section 94 Handbook for the subject activities are applicable.

   c. All Control Measures prescribed by an Enforcement Officer in a Corrective Action Order (CAO).

2. The following circumstances constitute failure to comply with the AQD dust control permit requirements:

   a. Failure to obtain an approved Dust Control Permit before engaging in activities that disturb or have the potential to disturb soils and cause fugitive dust to enter the air;

b. Failure by a permittee or owner to include in the construction contract with his prime contractor a monetary allowance for any dust control options specified in either the Dust Control Permit or, if applicable, the Dust Control Mitigation Plan.

c. Failure by the permit holder to include in his construction contracts with his subcontractors a monetary allowance for any applicable dust control options specified in either the Dust Control Permit or, if applicable, the Dust Control Mitigation Plan.

d. Failure to perform any duty to allow or carry out an inspection, or monitoring activity required by AQD.

3. The following circumstances constitute failure to fully employ BACM:

a. Failure to employ any Best Management Practice described in this Handbook included in an approved Dust Control Mitigation Plan or incorporated as a Dust Control Permit condition.

b. Performing any construction activity that creates a visible plume of dust that extends more than 100 yards from its point of origin.

c. Failure to clean up mud or dirt that is tracked out onto a paved road and that extends a cumulative distance of 50 or more feet from the point of origin within one hour of discovery, and failure to clean up trackout that extends less than 50 cumulative feet from the point of origin by the end of the work day or evening shift, as applicable.

d. Performing any construction activity that creates a visible plume of dust exceeding 20% opacity.

e. Failure to maintain project soils with adequate soil moisture content to prevent wind erosion as measured by a test method approved in writing by AQD and EPA.

f. Failure to maintain project soils in a damp, crusted, covered, or stabilized condition.

Corrective Action Order (CAO)

When Enforcement Officers observe a potential violation of Section 94 Permitting and Dust Control for Construction Activities, a CAO may be issued to the permittee and/or persons conducting the activity. Corrective action should be taken as directed. If the corrective action is intended to be a permanent change to the methods for dust mitigation on site, a modification to the Dust Control Permit must be filed by the permittee to incorporate the control measures specified by the CAO as a condition of the permit.

Notice of Violation (NOV)

If a NOV is received, it will be accompanied by a form entitled "Option Letter." The following choices will be presented:

a. **Contest neither the "facts alleged" nor the "penalty;"**

b. **Contest the facts alleged in the NOV and request an appearance before the AQD Hearing Officer.** This option should be selected if the alleged facts of the NOV can be reasonably disputed. Proper and complete documentation of fugitive dust mitigation measures should be submitted with the option letter; or

c. **Contest the penalty assessed.** In this instance, the alleged facts are not contested. Only the penalty is considered inappropriate. When appearing before the Hearing Officer the testimony should be focused on the factors regarding the penalty.

BMP: DUST CONTROL PERMIT COMPLIANCE (continued)

DCP 06

Appealing a Notice of Violation

If the Hearing Officer rules on the NOV, and you are not satisfied with the results, you may appeal to the Hearing Board. The Hearing Board will hear your appeal *de novo*. Therefore, any information you wish to be considered must be brought to the Hearing Board assuming they have no prior knowledge of the alleged facts or penalty.

There is a time limit in which to appeal to the Hearing Board and a "Request for Hearing Before the Air Pollution Control Hearing Board" form must be submitted to AQD. You will receive an "Order to Pay" from the Hearing Officer. Enclosed with that Order will be the information for the appeal process.

Penalty Structure

1. Penalties for violations of permit conditions begin at $250. CAOs are generally issued when proper preventive measures have not been made or when the actions required in a CAO have not been implemented.

2. Penalties for failure to maintain soils in a damp, crusted, or stabilized condition, or to clean track-out from paved roads begin at $1,000.

3. Penalties for fugitive dust emissions begin at $2,000. Penalties increase with subsequent violations within specified time frames. (see Attachment 1: Regulations Pertaining to Construction Activity Dust Control).

BMP: PHASING

GEN 01

Project Phasing

CONTROL MEASURES

1. The Dust Control Permit and Dust Control Mitigation Plan must address all phases and stages of the construction project. For projects with large cut and fill requirements, the land not active after the cut and fill must be stabilized using a palliative or other approved control measure and vehicle access must be prevented. Permittees should also limit the area disturbed at any one time.

2. The construction project may consist of a single *phase* or be divided into as many *phases* as the permittee chooses. Each phase must have distinct physical boundaries to make it easily identifiable. Construction project activities are to be further divided, whenever applicable, into the six following *stages* of project activities: 1) offsite utility and street development, 2) site preparation and earthwork, 3) forms construction and pouring, 4) subgrade preparation and paving, 5) building, and 6) landscaping.

3. When project stages are identified, the following information must be provided for each project stage:

   a. Stage number and title;

   b. Amount of acreage included in stage;

   c. Title of BMP activity;

   d. Control Requirements for activity; and

   e. Best Management Practice Control Measures to be implemented to meet Control Requirements.

4. Project phase planning for dust control is a cost-effective method for reducing potential emissions on a construction site. Project planning may include the following procedures:

   a. Reducing the size of the staging area;

   b. Disturbing only a portion of the overall site at one time;

   c. Paving roadways as soon as possible;

   d. Constructing block walls as soon as possible;

   e. Planting perimeter vegetation with greater than 50 percent silhouette areas at the beginning of the project;

   f. Limiting the number of ingress and egress points;

   g. Paving parking lots as soon as possible;

   h. For large cut and fill projects, stabilizing the portion of the construction site not being actively worked for the period of time it is vacant; or

   i. Confine import haul traffic to compacted or paved routes where possible to avoid picking up soil and rock in tire treads.

BMP: RECORD KEEPING

GEN 02

Recording Dust Control Measures

REQUIREMENTS

- Record Use of Dust Palliatives
- Record Track-out Conditions and Cleanup
- Notify AQD when project is complete
- Record all Dust Control Measures
- Notify AQD of compliance with CAOs
- Retain project records

CONTROL MEASURES

1. Document all use of dust palliatives on the Dust Palliative Information Form. (see Appendix D: Dust Control Permit Supplemental Forms)

2. Record Track-out conditions daily and document cleanup measures taken.

3. Record other dust control measures taken, including date, time, and amount of water applied for dust control purposes.

4. Notify AQD of compliance with any CAOs issued.

5. Notify AQD upon completion of project.

6. Retain all project records for one year or six months beyond project completion, whichever is greater.

BMP: WEATHER MONITORING

GEN 03

Weather Conditions

REQUIREMENTS

- Monitor current weather conditions and weather predictions from National Weather Service
- Cease all construction activities if fugitive dust exceeds 20% opacity or visible plume restrictions and cannot be controlled.

CONTROL MEASURES

1. When winds occur that cause fugitive dust emissions, despite adhering to all Best Management Practices, all construction activities must cease immediately, except water trucks/pulls which should continue to operate.

2. Water trucks/pulls should continue to operate under these circumstances unless wind conditions are such that continued operation of watering equipment cannot reduce fugitive dust emissions or visibility is limited to an extent that it is hazardous to continue operating equipment.

BEST MANAGEMENT PRACTICES FOR DUST CONTROL

Best Management Practices are site-specific dust control measures that are based on each project soil type, specific construction activities, phases and stages. These practices must be included in each Dust Control Permit Mitigation Plan and are established to meet the goal of reducing particulate emissions from construction sites. Additionally, some practices are designed for the purpose of reducing the amount of water needed for dust control.

1. Soil Type Categories

Soil types are classified into five categories (high, moderately high, moderately low, low, and slight) based on their particulate emission potential (PEP). The fifth category, "slight", is created solely to identify areas of bedrock outcrops. PEP is determined by soil silt content (measured by the soil percentage that will pass through a 200-mesh sieve) and optimum moisture content (measured by the percent of moisture necessary to compact soils).

Figure 1 depicts a "decision flowchart" using these parameters. A graph, which plots measured optimum moisture content vs. silt content for Las Vegas Valley soils, is used to classify PEP and is included as Figure 2. If optimum moisture content or silt content is not known for a specific project location, maps of Clark County and Las Vegas Valley delineating the five soil type categories are provided as Figures 3 and 4, respectively.

Soil type category maps are to be used as a guideline. The actual measured silt content and moisture content for maximum compaction shall take precedence over any mapped soil type categories. Permit holders shall immediately modify their Dust Control Permit if construction site soils are found to be different than mapped categories.

2. Best Management Practices

The following subsections list the current Best Management Practices (BMPs) developed and approved for use in Clark County for dust mitigation for construction activities. The BMPs are organized alphabetically by construction activity.

The Control Requirements of each construction activity category to be conducted on the construction project must be met through implementation of Control Measures. Within most construction activity categories there are choices of Control Measure(s) to be selected from to meet the Control

Requirements.

Control Requirements are stated for each construction activity. All Control Measures that will be used to meet the Control Requirements on the construction project must be identified in the Dust Control Mitigation Plan for each construction activity.

Control Measures are presented by soil type category where applicable. Some Control Measures apply to construction activities regardless of soil type. The Control Measures selected to meet Control Requirements must address the soil type for the area in which the construction project is permitted (see Figures 3 and 4).

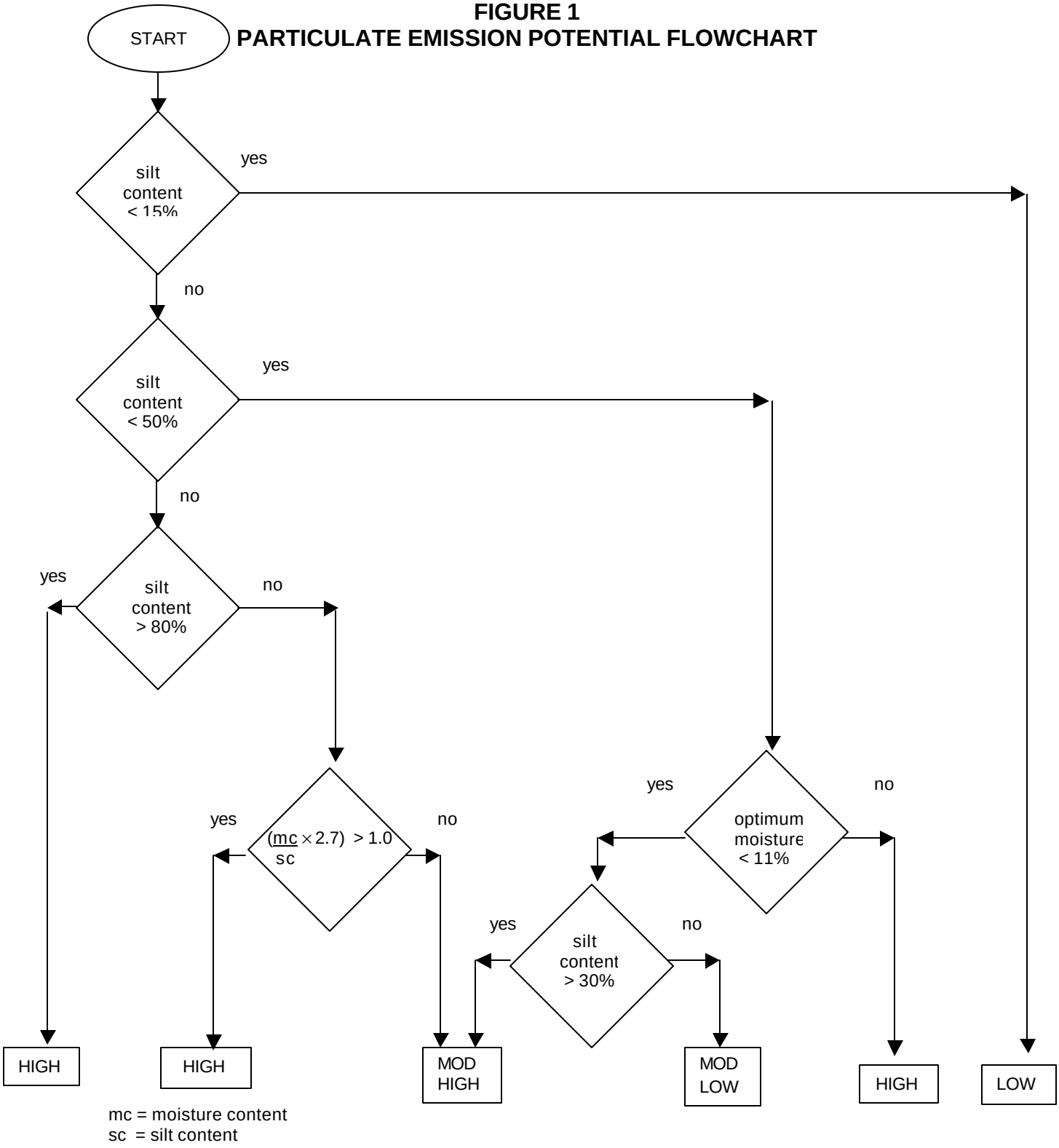
Control Measures not currently listed in the Section 94 Handbook may be proposed in a Dust Mitigation Plan. Such unlisted Control Measures will be reviewed by AQD staff and may require additional information regarding their effectiveness. Any unlisted Control Measure must clearly meet the Control Requirements for an activity category.

The AQD will apply the following minimum criteria when evaluating any unlisted Control Measures that are proposed to meet the Control Requirements for a BMP:

1. The Control Measure technique is a new or alternative technology that is demonstrated to be equally or more effective in meeting the Control Requirement than the existing Control Measures; or
2. Site logistics do not practically allow for implementation of a listed Control Measure as written (e.g. road width or pre-existing barriers limit the size or width of a gravel pad); or
3. The owner/operator demonstrates that a listed Control Measure is technically infeasible due to site-specific or material-specific conditions, such that implementation of the Control Measure will not provide a benefit in reducing fugitive dust (e.g. pre-soaking screened, washed rock when handling).

Permit deviations from specific soil type BMPs in the form of a “downgrade” to the BMPs listed for a soil type with a lower PEP, or applying a Control Measure listed for all soil types in lieu of a specific soil type BMP, are not approvable unless demonstrated to meet at least one of the above criteria.

FIGURE 1
PARTICULATE EMISSION POTENTIAL FLOWCHART



Adopted 8/24/00

Air Pollution Control Regulations

Figure 4-1
Silt Content vs. Optimum Moisture Content

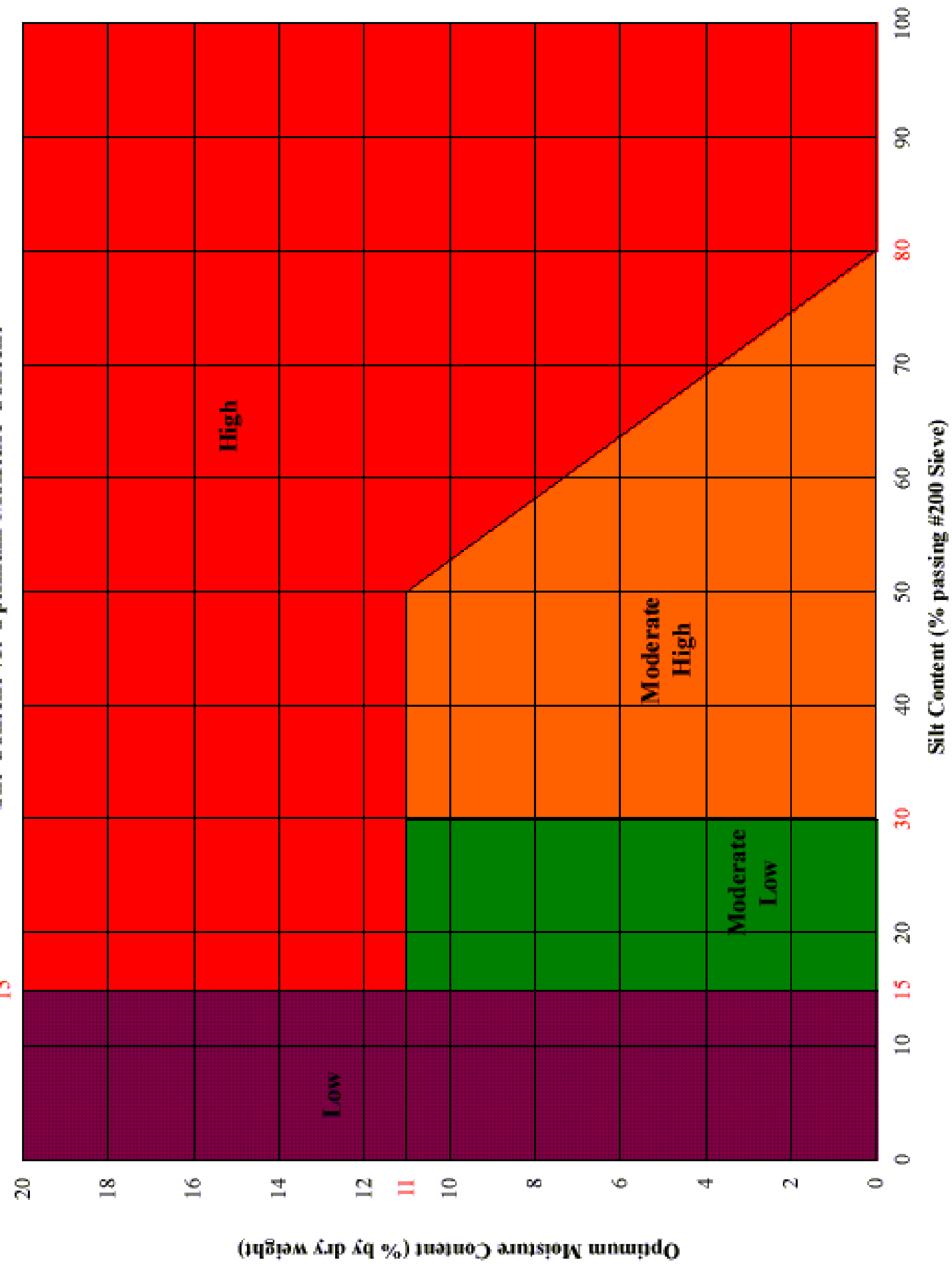


FIGURE 4-2

CLARK COUNTY, NEVADA

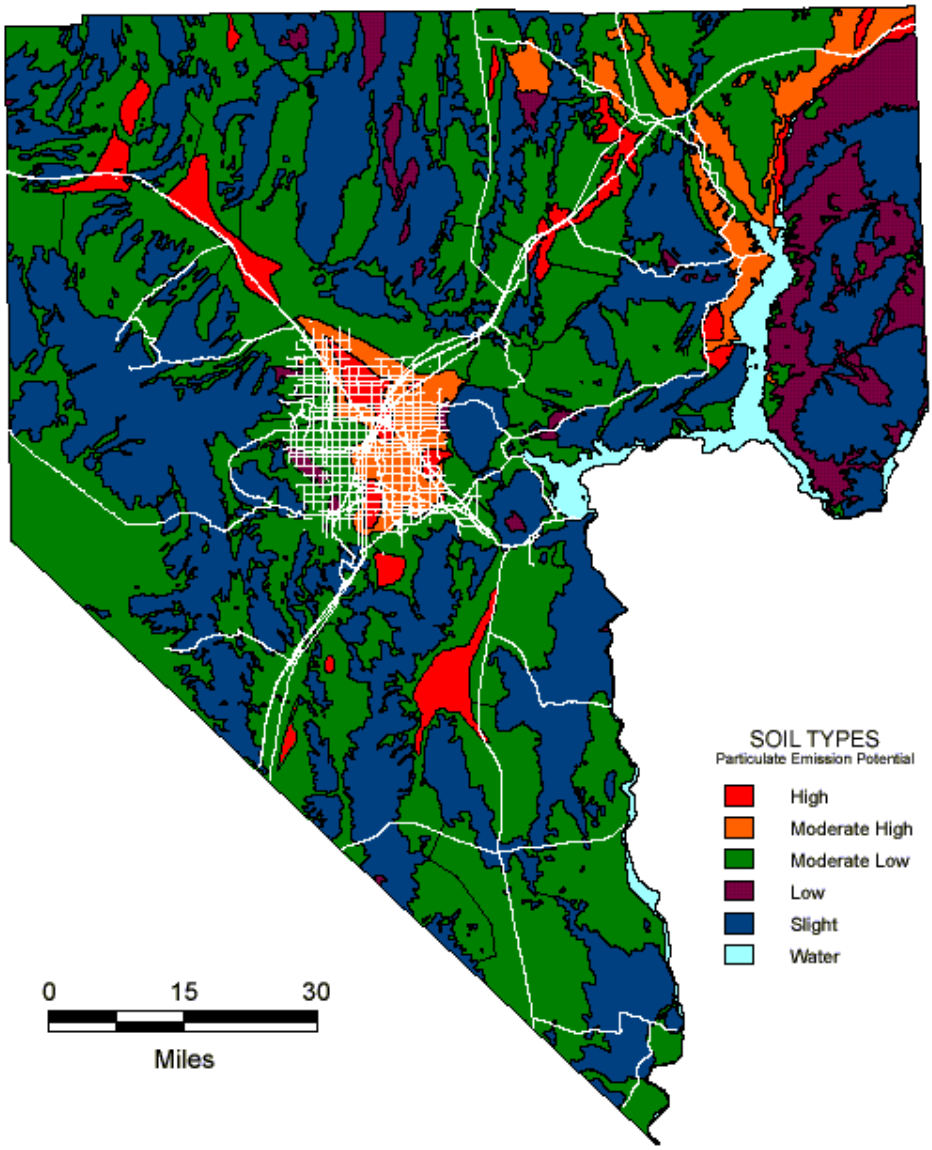
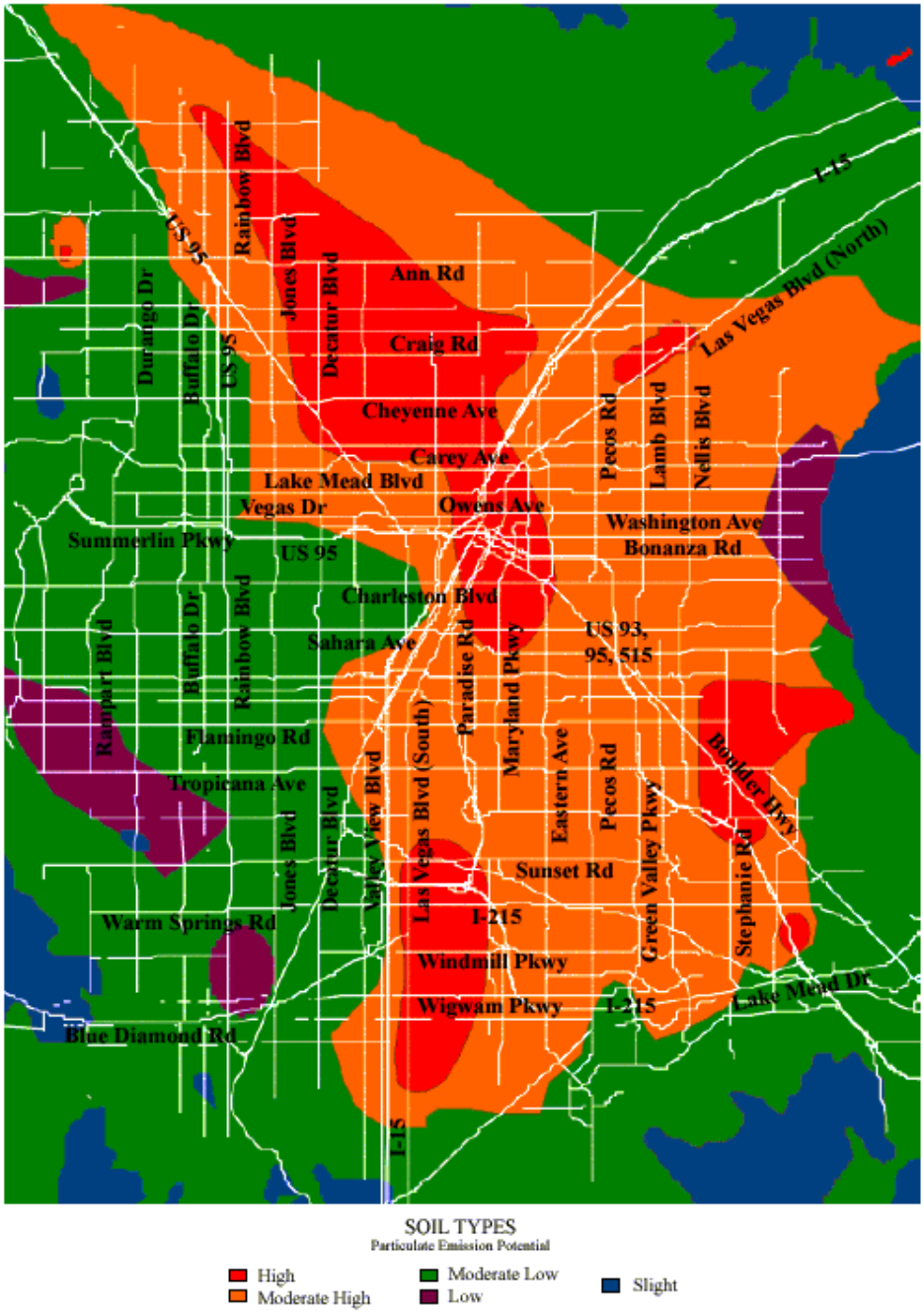


Figure 4-3

LAS VEGAS VALLEY



SOIL TYPES

Particulate Emission Potential

High
Moderate High
Moderate Low
Low
Slight

BMP: BACKFILLING CST 01

Backfilling – Earthmoving Operations

REQUIREMENTS:

- Stabilize backfill material when not actively handling.
- Stabilize backfill material during handling.
- Stabilize soil at completion of activity.

CONTROL MEASURES FOR ALL SOIL TYPES

01-1. Water backfill material to maintain material moisture or to form crust when not actively handling.

01-2. Apply dust palliative to backfill material to form crust when not actively handling.

01-3. Cover or enclose backfill material when not actively handling.

01-4. Mix backfill soil with water prior to moving.

01-5. Dedicate water truck or large hose to backfilling equipment and apply water as needed.

01-6. Water to form crust on soil immediately following backfilling.

01-7. Empty loader bucket slowly.

01-8. Minimize drop height from loader bucket.

CONTROL MEASURES FOR SPECIFIC SOIL TYPE

High

01-6. Apply and mix water and surfactant solution into the backfill material until optimum moisture is reached.

Moderate High

01-7. Apply and mix water and tackifier solution into the backfill material until optimum moisture is reached.

Moderate Low

01-8. Apply and mix water into the backfill material until optimum moisture is reached.

Low

01-9. Mix moist soil with dry soil until the optimum moisture is reached.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Stabilize backfill material when not actively handling	✔	✔	✔	✔
Empty loader bucket slowly and minimize drop height	✔	✔	✔	✔
Water to form crust on soil immediately following backfilling	✔	✔	✔	✔
Dedicate water truck or large hose to backfilling equipment	✔	✔	✔	✔
Mix backfill material with water and surfactant	✔			
Mix backfill material with water and tackifier		✔		
Mix backfill material with water			✔	✔

BMP: BLASTING - Abrasive

CST 02

Abrasive Blasting

REQUIREMENTS:

- Stabilize surface soils where support equipment will operate.
- Stabilize particulate matter in surrounding area following blasting.
- Limit visible emissions to no more than an average of 40% opacity for any period aggregating 3 minutes in any 60-minute period.

CONTROL MEASURES FOR ALL SOIL TYPES

02-1. Prewet surface soils where support equipment and vehicles will be operated.

02-2. Use dust palliative on surfaces where support equipment will be operated.

02-3. Clean particulate material from surrounding area following blasting.

02-4. Apply dust palliative to surrounding area following blasting.

02-5. Abrasive blasting should be conducted within an enclosed structure whenever possible to preclude the release of visible emissions to the atmosphere.

02-6. A wet method of abrasive blasting, using air as a propellant, must use a sufficient amount of water to effectively limit the visible emissions to no more than an average of 40% opacity for any period aggregating 3 minutes in any 60-minute period.

02-7. Hydroblasting, using water as the propellant, must be conducted in a manner to effectively limit the visible emissions to no more than an average of 40% opacity for any period aggregating 3 minutes in any 60 minute period.

02-8. Dry, unconfined blasting with abrasive material must use only those abrasives that are approved and certified by the California Air Resources Board (CARB) for such use (see Attachment 3: CARB-Approved Abrasives Information).

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Prewet surface soils where support equipment will operate	✔	✔	✔	✔
Apply dust palliative on surfaces where surface equipment will be operated	✔	✔	✔	✔
Apply dust palliative to surrounding area following blast	✔	✔	✔	✔
Clean particulates from surrounding area following blasting	✔	✔	✔	✔
Abrasive blasting should be conducted within an enclosed structure whenever possible	✔	✔	✔	✔
Wet method of blasting, using air as a propellant, must use water to limit emission opacity to 40% for any 3 minute period in a 60 minute period	✔	✔	✔	✔
Hydroblasting, using water as a propellant, must limit emission opacity to 40% for any 3 minute period in a 60 minute period	✔	✔	✔	✔
Dry, unconfined blasting must use only CARB approved abrasives and limit emission opacity to 40% for any 3 minute period in a 60 minute period	✔	✔	✔	✔

BMP: BLASTING - Soil and Rock

CST 03

Explosive Blasting of Soil and Rock	***Supplemental Form to Dust Control Permit Is Required***
REQUIREMENTS:	
• Submit supplemental form for blasting.	• Confine blasting to times when wind direction is away from the closest residential areas, occupied buildings, and major roadways.
• Stabilize soil prior to and during blast preparation activities.	• Stabilize soil after blasting.
• No blasting allowed when the National Weather Service issues a high wind advisory.	• Confine blasting to between 8:00 a.m. and 4:30 p.m., excluding Saturdays, Sundays, and holidays, unless prior permission is obtained from the Control Officer.

CONTROL MEASURES FOR ALL SOIL TYPES

03-1. Maintain surface rock and vegetation where possible to reduce exposure of disturbed soil to wind.

03-2. Prewet surface soils where drills, support equipment, and vehicles will be operated.

03-3. Use water to form crust on soil immediately following blast and safety clearance.

03-4. Use dust palliative to form crust on soil immediately following blast and safety clearance.

03-5. Maintain surface soil watering as needed to prevent dust. At completion of work shift stabilize all disturbed soil surfaces to establish crust and prevent wind erosion of soil.

03-6. Prior to setting explosive charges in holes, document current and predicted weather conditions as provided by the National Weather Service. If wind advisory (over 25 miles per hour) is current or forecasted for the next 24 hours, do not charge any blast holes. When setting explosive charges, monitor weather forecast for wind advisory on National Weather Service Radio and Internet sites. If a wind advisory is stated, discontinue charging additional blast holes. Limit

the blast to holes charged at time the wind advisory is issued.

03-7. Limit the blast footprint area to no larger than what can be practically stabilized immediately following the blast.

CONTROL MEASURE FOR SPECIFIC SOIL TYPE

High

03-8. Presoak surface soils to depth of the caliche or bedrock with water and surfactant mixture using water trucks, water pulls, sprinklers or wobblers.

Moderate High

03-9. Presoak surface soils to depth of the caliche or bedrock with water and tackifier mixture using water trucks, water pulls, sprinklers or wobblers.

Moderate Low and Low

03-10. Presoak surface soils to depth of the caliche or bedrock with water using water trucks, water pulls, sprinklers, or wobblers.

BMP: BLASTING - Soil and Rock (continued)

CST 03

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Submit supplemental form for blasting	✓	✓	✓	✓
Maintain surface rock and vegetation when possible	✓	✓	✓	✓
Limit blast footprint to manageable size	✓	✓	✓	✓
Prewet surface soils where drill and support equipment will operate	✓	✓	✓	✓
Monitor National Weather Service for advisory	✓	✓	✓	✓
Document weather conditions and predictions	✓	✓	✓	✓
Form crust on soil following blast	✓	✓	✓	✓
Confine blasting to times when wind direction is away from the closest residential areas, occupied buildings, and roadways	✓	✓	✓	✓
Presoak with water and surfactant mixture	✓			
Presoak with water and tackifier mixture		✓		
Presoak with water			✓	✓

BMP: CLEARING AND GRUBBING

CST 04

Clearing and Grubbing for Site Preparation and Vacant Land Cleanup

REQUIREMENTS:

- Maintain stability of soil prior to clearing and grubbing.
- Stabilize soil during clearing and grubbing activities.
- Stabilize soil immediately after clearing and grubbing activities.

CONTROL MEASURES FOR ALL SOIL TYPES

04-1. Prewet surface soils where equipment will be operated.

04-2. For areas without continuing construction, maintain live perennial vegetation and desert pavement where possible.

04-3. Stabilize soil surface with dust palliative unless immediate construction is to continue.

04.4 Use water to form crust on soil immediately following clearing/grubbing activities.

04.5 Use dust palliative to form crust on soil immediately following clearing and grubbing activities.

CONTROL MEASURES FOR SPECIFIC SOIL TYPE

High

04-6. Apply water and surfactant mixture.

Moderate High

04-7. Apply water and tackifier mixture.

Moderate Low and Low

04-8. Apply water.

Adopted 8/24/00
Air Pollution Control Regulations

BMP: CLEARING AND GRUBBING (continued)

CST 04

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Prewet surface soils where equipment will operate	✓	✓	✓	✓
Maintain live perennial vegetation and desert pavement where possible	✓	✓	✓	✓
Stabilize soil surface with dust palliative unless immediate construction is to continue	✓	✓	✓	✓
Form crust on soil immediately following clearing/grubbing operations	✓	✓	✓	✓
Apply water with water and surfactant mixture	✓			
Apply water with water and tackifier mixture		✓		
Apply water			✓	✓

BMP: CLEARING FORMS

CST 05

Clearing Forms

In North Las Vegas, verify Building Code Restrictions for use of water on forms.

REQUIREMENTS:

- Control fugitive dust emissions while clearing forms to comply with 20% opacity and plume length restrictions.

CONTROL MEASURES FOR ALL SOIL TYPES

05-1. Use single stage pours, unless prohibited by engineering design or building code, to minimize form clearing.

05-2. Use water spray to clear forms.

05-3. Use sweeping and water spray to clear forms.

05-4. Use industrial shop vacuum to clear forms.

05-5. Avoid use of high pressure air to blow soil and debris from the form.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Use single stage pours where possible	✓	✓	✓	✓
Other than North Las Vegas, use water spray or sweeping with water, or shop vacuum	✓	✓	✓	✓
In North Las Vegas, sweep then use industrial shop vacuum	✓	✓	✓	✓
Avoid use of high pressure air to clear forms	✓	✓	✓	✓

BMP: CRUSHING

CST 06

Crushing of Rock, Soil, and Demolition Debris	***Operating Permit Required for Powered Crushers*** *Follow Permit Standards and Requirements*
REQUIREMENTS:	
• Stabilize surface soils where support equipment will operate.	• Stabilize material during crushing.
• Stabilize material before crushing.	• Stabilize material after crushing.

CONTROL MEASURES

06-1. Prewet surface soils where support equipment and vehicles will be operated.

06-2. Apply dust palliative to surface soils where support equipment and vehicles will be operated.

06-3. Prewet material prior to loading into crusher.

06-4. Use dust suppressant to stabilize material during crushing.

06-5. Monitor emissions opacity.

06-6. Establish crust on crushed material to minimize emissions.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Prewet surface soils where support equipment and vehicles will be operated	✔	✔	✔	✔
Maintain moisture content of materials per permit conditions	✔	✔	✔	✔
Monitor emissions opacity	✔	✔	✔	✔
Establish crust on crushed material	✔	✔	✔	✔

BMP: CUT & FILL

CST 07

Cut and Fill of Soils for Site Grade Preparation

REQUIREMENTS:

- Presoak soils.
- Stabilize soil during cut and fill activities.
- Stabilize soils prior to cut and fill activities.
- Stabilize soil after cut and fill activities.

CONTROL MEASURES FOR ALL SOIL TYPES

07-1. Pre-water with sprinklers or wobblers to allow time for penetration.

07-2. Pre-water with water trucks or water pulls to allow time for penetration.

07-3. Dig a test hole to depth of cut or equipment penetration to determine if soils are moist at depth. Continue to pre-water if not moist to depth of cut.

07-4. Use water truck/pull to water soils to depth of cut prior to subsequent cuts.

07-5. Apply water to form crust on soil following fill and compaction.

07-6. Apply dust palliative to form crust on soil following fill and compaction.

CONTROL MEASURES FOR SPECIFIC SOIL TYPES

High

07-7. Pre-water with water and surfactant mixture until soil is moist to a depth of cut or equipment penetration.

Moderate High

07-8. Pre-water with water and tackifier mixture until soil is moist to a depth of cut or equipment penetration.

Moderate Low and Low

07-9. Water until soil is moist to a depth of cut or equipment penetration.

BMP: CUT & FILL (continued)

CST 07

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Pre-water to allow time for water penetration	✓	✓	✓	✓
Prewet surface soils where trencher and support equipment will operate.	✓	✓	✓	✓
Dig a test hole to depth of cut to determine if soils are moist at depth	✓	✓	✓	✓
Form crust on soil following fill and compaction	✓	✓	✓	✓
Use water truck/pull to water soils to depth of cut prior to subsequent cuts	✓	✓	✓	✓
Pre-water with water and surfactant mixture	✓			
Pre-water with water and tackifier mixture		✓		
Pre-water			✓	✓

BMP: DEMOLITION – Implosion

CST 08

Implosive Blasting Demolition

Supplemental Form To Dust Control Permit is Required

REQUIREMENTS:

- Submit Supplemental Form.
- Monitor and document current weather conditions and weather predictions from National Weather Service.
- Confine blasting to times when wind direction is away from closest residential areas, occupied buildings, and major roadways.
- Confine blasting times to between 8:00 a.m. and 4:30 p.m., excluding holidays, unless prior permission is obtained from the Control Officer.
- Stabilize surface soils where support equipment and vehicles will be operated.
- Stabilize soils prior to blasting.
- Stabilize soils and blast debris immediately following blasting and safety clearance.

CONTROL MEASURES FOR ALL SOIL TYPES

08-1. Prewet surface soils where support equipment and vehicles will be operated.

08-2. Apply dust palliative where support equipment and vehicles will be operated.

08-3. Restrict support equipment and vehicles to existing paved or stable areas.

08-4. Maintain surface soil watering as needed to prevent dust.

08-5. At completion of work shift, water all disturbed soil surfaces to establish crust and prevent wind erosion of soil.

08-6. Prior to setting explosive charges, obtain and document current and predicted weather conditions as provided by the National Weather Service. If wind advisory (over 25 miles per hour) is current or forecasted for blast period, do not set charges.

08-7. Water to form crust on wind erodible materials immediately following blast and safety clearance.

08-8. Apply dust palliative to form a crust on wind erodible materials.

08-9. Following blast and safety clearance, thoroughly clean blast debris from paved surfaces.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Prewet surface soils where support equipment will operate	✓	✓	✓	✓
Maintain surface soil watering as needed to prevent dust.	✓	✓	✓	✓
Restrict support equipment and vehicles to existing paved or stable areas	✓	✓	✓	✓
Monitor National Weather Service for advisory	✓	✓	✓	✓
Document weather conditions and predictions	✓	✓	✓	✓
Form crust on debris and soil following blast	✓	✓	✓	✓
Confine blasting to times when wind direction is away from closest residential areas, occupied buildings or roadways	✓	✓	✓	✓
At completion of work shift, water all disturbed soil surfaces	✓	✓	✓	✓

BMP: DEMOLITION – Mechanical/Manual

CST 09

Mechanical and Manual Demolition	***Supplemental Form To Dust Control Permit is Required***
REQUIREMENTS:	
	• Stabilize surface soil where support equipment and vehicles will operate.
• Stabilize wind erodible surfaces to prevent dust.	• Stabilize loose soil and demolition debris.

CONTROL MEASURES FOR ALL SOIL TYPES

09-1. Prewet surface soil where support equipment and vehicles will be operated.

09-2. Apply dust palliative where support equipment and vehicles will operate.

09-3. Water area and maintain surface soil stability as needed to prevent dust.

09-4 Cover wind erodible demolition debris to prevent dust emissions.

09-5. Use water on wind erodible demolition debris during handling and after dumping to prevent dust.

09-6. Use dust palliative to form crust on demolition debris.

09-7. At completion of work shift, water all disturbed soil surfaces to establish crust and prevent wind erosion.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Prewet and maintain surface soil moisture where support equipment will operate.	✓	✓	✓	✓
Stabilize demolition debris during demolition, loading, and dumping to prevent dust.	✓	✓	✓	✓
At completion of work shift, water all disturbed soil surfaces and demolition debris.	✓	✓	✓	✓

Adopted 8/24/00
Air Pollution Control Regulations

BMP: DISTURBED SOIL

CST 10

Disturbed Soil

REQUIREMENTS:

- Stabilize disturbed soil throughout construction site.
- Stabilize disturbed soil between structures.

CONTROL MEASURES FOR ALL SOIL TYPES

10-1. Apply water to stabilize disturbed soil throughout construction site.

10-2. Limit vehicle traffic and disturbance on soils where possible.

10-3. If interior block walls are planned, install as early in the construction as possible.

10-4. Apply dust palliative based on soil type.

CONTROL MEASURES FOR SPECIFIC SOIL TYPES

High

10-5. Apply palliative such as gypsum mulch (Note: Gypsum mulch should not inhibit future vegetation).

10-6. Install perimeter wind barrier (three (3) to five (5) feet high made of material with a porosity of 50% or less.

Moderate High, Moderate Low, and Low

10-7. Apply water to stabilize disturbed soils. Soils must be kept in a damp, crusted, or covered condition.

BMP: DISTURBED SOIL (continued)

CST 10

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Apply water to stabilize disturbed soils throughout construction site	✓	✓	✓	✓
Limit vehicle traffic and disturbance	✓	✓	✓	✓
Install planned block walls as early in construction as possible	✓	✓	✓	✓
Install perimeter wind barriers	✓			
Apply gypsum mulch palliative	✓			
Apply water to stabilize soils		✓	✓	✓

BMP: DISTURBED LAND - LARGE TRACTS

CST 11

Disturbed Land – Large Tracts

REQUIREMENTS

- Stabilize soil to meet standards required by Regulation Section 90.
- Prevent access to limit soil disturbance.

CONTROL MEASURES FOR ALL SOIL TYPES

11-1. Prevent access by fencing, ditches, vegetation, berms, or other suitable barrier or means approved by the Control Officer.

11-2. Install perimeter wind barriers three (3) to five (5) feet high made of material with a porosity of 50% or less.

11-3. Plant perimeter vegetation early. Use of native and drought-tolerant plants with greater than 50% silhouette area is encouraged.

11-4. Stabilize disturbed soil with dust palliative for long-term stabilization.

11-5. Stabilize disturbed soil with vegetation for long-term stabilization.

11-6. Pave or apply surface rock for long-term stabilization.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Temporarily stabilize project soils by maintaining in a damp or crusted condition	✓	✓	✓	✓
Prevent access	✓	✓	✓	✓
Install perimeter wind barriers	✓	✓	✓	✓
Plant perimeter vegetation early	✓	✓	✓	✓
Permanently stabilize with dust palliative, vegetation or paving	✓	✓	✓	✓

BMP: DUST SUPPRESSANT, DUST PALLIATIVE, AND SURFACTANT SELECTION AND USE

CST 12

Dust Suppressants, Dust Palliatives, and Surfactants Selection and Use

REQUIREMENTS

- Follow AQD Guidelines for Selection and Appropriate Use of Liquid Dust Palliatives.
- Record use of suppressants and dust palliatives and retain records.
- Consider long-term use of land when selecting dust palliatives.
- Follow applicable federal and state regulations.

CONTROL MEASURES FOR ALL SOIL TYPES

Follow selection and use information contained in Attachment 2: AQD Dust Suppressant, Palliative, and Surfactant Guidelines.

12-1. For traffic area applications use Table 1: Appropriate Use of Liquid Dust Palliatives and Application Rates.

12-2. For non-traffic area applications use Table 2: Appropriate Use of Liquid Dust Palliatives and Application Rates.

12-3. Follow applicable federal and state regulations.

12-4. Record dust suppressant and palliative use and retain records as required by Regulation Section 94.8.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Follow BMP requirements	✓	✓	✓	✓
Follow Selection and Use Criteria	✓	✓	✓	✓
Combine traffic control with palliative use for long-term stabilization	✓	✓	✓	✓
Record dust suppressant and palliative use and retain records	✓	✓	✓	✓

Adopted 8/24/00
Air Pollution Control Regulations

BMP: IMPORTING SOIL, ROCK, AND OTHER BULK MATERIALS

CST 13

Importing Soils

REQUIREMENTS:

- Determine PEP of imported material.
- Implement BMP CST 22 (Truck Loading).
- Stabilize material while loading to prevent fugitive dust emissions.
- Stabilize material while transporting to prevent fugitive dust emissions.
- Stabilize material while unloading to prevent fugitive dust emissions.

CONTROL MEASURES FOR ALL SOIL TYPES

13-1. Use tarps or other suitable enclosures on haul trucks.

13-2. Maintain three (3) to six (6) inches of freeboard to minimize spillage.

13-3. Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage.

13-4. Clean wheels and undercarriage of haul trucks prior to leaving construction site.

13-5. Limit vehicular speeds to 15 mph on the work site.

13-6. Keep soils at optimum moisture content while actively handling.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Haul trucks must have tarps or other suitable enclosures	✓	✓	✓	✓
Maintain 3” to 6” freeboard on loads	✓	✓	✓	✓
Check belly dump trucks regularly and remove trapped rocks	✓	✓	✓	✓
Clean wheels and undercarriage of haul trucks prior to leaving site	✓	✓	✓	✓
Limit vehicular speeds to 15 m.p.h. on-site	✓	✓	✓	✓
Keep soils at optimum moisture content while actively moving	✓	✓	✓	✓

Adopted 8/24/00
Air Pollution Control Regulations

BMP: LANDSCAPING

CST 14

Landscaping

REQUIREMENTS:

- Stabilize soils, materials, and slopes.

CONTROL MEASURES FOR ALL SOIL TYPES

14-1. Apply water to materials to stabilize.

14-2. Maintain materials in a crusted condition.

14-3. Maintain effective cover over materials.

14-4. Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slope.

CONTROL MEASURES FOR SPECIFIC SOIL TYPES

High

14-5. Apply water and surfactant mixture prior to leveling or any other earth moving activity to keep the soil moist throughout the process.

Moderate High

14-6. Apply water and tackifier mixture prior to leveling or any other earth moving activity to keep the soil moist throughout the process.

Moderate Low and Low

14-7. Apply water prior to leveling or any other earth moving activity to keep the soil moist throughout the process.

BMP: LANDSCAPING (continued)

CST 14

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Maintain materials in a damp, crusted, or covered condition	✔	✔	✔	✔
Initially, stabilize sloping surfaces with soil binders	✔	✔	✔	✔
Apply water and surfactant mixture prior to earth moving activity	✔			
Apply water and tackifier mixture prior to earth moving activity		✔		
Apply water prior to earth moving activity			✔	✔

BMP: PAVING/SUBGRADE PREPARATION

CST 15

Paving/Subgrade Preparation

REQUIREMENTS

- Stabilize soils prior to activities.
- Stabilize soils during activities.
- Stabilize soils following activities.

CONTROL MEASURES FOR ALL SOIL TYPES

15-1. Pre-water subgrade surface until optimum moisture content is reached and maintained.

15-2. Maintain at least 70% of optimum moisture content for Type II material while Type II aggregate is being applied.

15-3. Place tack coat on Type II aggregate base immediately after Type II is applied.

15-4. Stabilize adjacent disturbed soils following paving activity by crusting with water.

15-5. Stabilize adjacent disturbed soils following paving activity with dust palliative application.

15-6. Stabilize adjacent disturbed soils following paving with immediate landscaping activity or installation of vegetative or rock cover.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Pre-water subgrade surface to maintain optimum moisture content	✔	✔	✔	✔
Maintain 70% optimum moisture content when applying Type II aggregate	✔	✔	✔	✔
Place tack coat after Type II aggregate is applied	✔	✔	✔	✔
Stabilize adjacent disturbed soil	✔	✔	✔	✔

BMP: SCREENING

CST 16

Screening of Rock, Soil, and Construction Debris	***Operating Permit is required for motorized screens***
REQUIREMENTS	
	• Limit fugitive dust to opacity and plume length standards.
• Pre-treat material prior to screening.	• Stabilize material immediately after screening.

CONTROL MEASURES FOR ALL SOIL TYPES

16-1. Dedicate water truck or large hose to screening operation.

16-2. Pre-wet material to be screened to at least 70% of optimum moisture content.

16-3. Apply dust suppressant to material prior to screening.

16-4. Drop material through the screen slowly and minimize drop height.

16-5. Apply water to material as it is being dropped through the screen.

16-6. Apply water to stabilize screened material and surrounding area after screening.

16-7. Apply dust palliative to stabilize screened material and surrounding area after screening.

16-7. Install wind barrier upwind of screen as high as the screen drop point and made of material with a porosity of 50% or less.

BMP: SCREENING (continued)

CST 16

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Pre-treat material prior to screening	✔	✔	✔	✔
Dedicate water truck or large hose to screening operation	✔	✔	✔	✔
Install wind barrier	✔	✔		
Pre-moisten material to be screened to 70% optimum moisture content	✔	✔	✔	✔
Stabilize screened material and surrounding area after screening	✔	✔	✔	✔

BMP: STAGING AREAS

CST 17

Staging Areas, Equipment Storage, and Material Storage Areas

REQUIREMENTS

- Stabilize staging area soils during use.
- Stabilize staging area soils at project completion.

CONTROL MEASURES FOR ALL SOIL TYPES

17-1. Limit size of staging areas.

17-2. Apply water to surface soils where support equipment and vehicles will be operated.

17-3. Apply dust palliative to surface soils where support equipment and vehicles will operate.

17-4. Limit vehicle speeds to 15 mph.

17-5. Limit ingress and egress points.

CONTROL MEASURES FOR SPECIFIC SOIL TYPES

High and Moderate High

17-6. Surround with wind barriers three (3) to five (5) feet in height and made of material with a porosity of 50% or less.

17-7. Apply screened or washed Type II aggregate.

17-8. Pave with thin paving.

Moderate Low and Low

17-9. Apply dust palliative.

17-10. Apply screened or washed Type II aggregate.

17-11. Supplement dust palliative or aggregate with watering, if necessary.

BMP: STAGING AREAS (continued)

CST 17

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Prewet surface soils where support equipment will be operated	✓	✓	✓	✓
Minimize size of staging areas	✓	✓	✓	✓
Limit vehicle speeds to 15 mph	✓	✓	✓	✓
Limit ingress and egress points	✓	✓	✓	✓
Surround with wind barriers	✓	✓		
Apply aggregate or pave with thin paving	✓	✓		
Apply dust palliative or aggregate			✓	✓
Stabilize at project completion	✓	✓	✓	✓

BMP: STOCKPILES

CST 18

Stockpiles

REQUIREMENTS

- Stabilize stockpiles.
- Stockpiles located within 100 yards of occupied buildings must not be constructed over eight (8) feet in height.
- Stockpiles over eight (8) feet high and not covered must have a road bladed to the top to allow water truck/pull access or must have a sprinkler irrigation system installed that is capable of complete stockpile coverage.

CONTROL MEASURES FOR ALL SOIL TYPES

18-1. Stockpile at optimum moisture content.

18-2. Remove material from the downwind side of the stockpile.

18-3. To the extent possible, maintain stockpile to avoid steep sides or faces.

18-4. Stabilize material in stockpile and surrounding area following stockpile-related activity.

CONTROL MEASURES FOR SPECIFIC SOIL TYPES

High

18-5. Apply water and surfactant during stacking, loading and unloading operations.

18-6. Apply palliative to all outer surfaces of the stockpile.

18-7. Provide and maintain wind barriers on three (3) sides of the pile, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and made of material with a porosity of 50% or less.

18-8. Apply temporary cover or screen in lieu of wind barrier.

Adopted 8/24/00
Air Pollution Control Regulations

Moderate High

18-9. Apply water and tackifier during stacking, loading and unloading operations.

18-10. Apply palliative to all outer surfaces of the stockpile.

18-11. Provide and maintain wind barriers on three (3) sides of the pile, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and made of material with a porosity of 50% or less.

18-12. Apply palliative and provide wind barriers on three (3) sides of the pile as high as the pile and made of material with a porosity of 50% or less.

Moderate Low and Low

18-13. Apply water during stacking, loading and unloading operations.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Stockpile at optimum moisture content	✓	✓	✓	✓
Remove material from the downwind side of stockpile	✓	✓	✓	✓
Stockpiles over 8' high must have road bladed to the top or an installed sprinkler system	✓	✓	✓	✓
Apply palliative and provide wind barriers on three (3) sides of stockpile	✓	✓		
Apply temporary cover or screen in lieu of wind barrier	✓			
Apply water and surfactant during operations	✓			
Apply water and tackifier during operations		✓		
Apply water during operations			✓	✓
Stabilize stockpile and area following activity	✓	✓	✓	✓

BMP: TRACK-OUT PREVENTION

CST 19

Prevention of mud, silt, and soil track-out onto paved roads

REQUIREMENTS

- Install and maintain track-out control devices in effective condition at all access points where paved and unpaved access or travel routes intersect.
- All exiting traffic must be routed over selected track-out control device(s).
- Track-out must be cleaned daily, at minimum.
- Track-out conditions, including preventive and corrective measures, must be recorded daily for every day that the construction project access is used by vehicles.
- Immediately clean track-out from paved surfaces when it extends 50 feet or more.

CONTROL MEASURES FOR ALL SOIL TYPES

19-1. Pave construction activities roadways as early as possible.

19-2. Install gravel pad(s) consisting of 1" to 3" rough diameter, clean, well-graded gravel or crushed rock (location of gravel pads must be identified on project map). Minimum dimensions must be 30 feet wide by 3 inches deep, and, at minimum, 50' or the length of the longest haul truck, whichever is greater. Re-screen, wash, or apply additional rock in gravel pad to maintain effectiveness.

19-3. Install wheel shakers in the event that track-out cannot be controlled with gravel pads. Clean wheel shakers on a regular basis to maintain effectiveness.

19-4. Install wheel washer in the event that track-out cannot be controlled with gravel pad and wheel shakers. Maintain wheel washers on a regular basis to maintain effectiveness.

19-5. Install wheel shakers as primary control measures in addition to or in place of gravel pads.

19-6. Install wheel washer as primary control measures in addition to or in place of wheel shakers and gravel pads.

19-7. Limit site accessibility to routes with track-out control devices in place by installing effective barriers on unprotected routes.

19-8. Record track-out conditions and clean-up actions in daily project records.

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Track-out conditions must be recorded daily	✓	✓	✓	✓
Install track-out control devices at all access points and limit traffic to these points	✓	✓	✓	✓
Gravel pads must consist of 1"-3" clean well graded gravel or crushed rock. Minimum dimensions 30' wide and 3" deep	✓	✓	✓	✓
Track-out control devices must be maintained and functional	✓	✓	✓	✓
Immediately clean track-out from paved surfaces when it extends 50' or more	✓	✓	✓	✓
Track-out must be cleaned daily at a minimum	✓	✓	✓	✓
Wheel shakers and washers must be listed as contingency measures for control of track-out on the Dust Mitigation Plan	✓	✓	✓	✓

BMP: TRAFFIC – CONSTRUCTION RELATED

CST 20

Traffic - Construction Related

REQUIREMENTS

- Stabilize all off-road traffic and parking areas.
- Stabilize all haul routes.

CONTROL MEASURES FOR ALL SOIL TYPES

20-1. Limit vehicle speeds to 15 mph (Note: Use of bumps or dips for speed control is encouraged).

20-2. Apply paving as soon as possible to all future roadway areas.

20-3. Apply water to haul routes to stabilize.

20-4. Apply dust palliative to haul routes to stabilize.

20-5. Apply gravel to off-road traffic and parking areas and maintain in a stabilized condition.

20-6. Apply gravel to haul routes and maintain in a stabilized condition.

20-7. Apply recycled asphalt (or other suitable material) to off-road traffic and parking areas and maintain in a stabilized condition.

20-8. Apply water to off-road traffic and parking areas and maintain in a stabilized condition.

20-9. Apply a dust palliative (designed for vehicle traffic) to off-road traffic and parking areas and maintain in a stabilized condition.

20-10. Supplement dust palliative or aggregate applications with watering, if necessary.

BMP: TRAFFIC – CONSTRUCTION RELATED (cont.) CST 20

Particulate Emission Potential

	High	Moderate High	Moderate Low	Low
Limit vehicle speeds to 15 mph	✔	✔	✔	✔
Apply paving to future roadways as soon as possible	✔	✔	✔	✔
Apply and maintain gravel, recycled asphalt or a dust suppressant suitable for vehicle traffic	✔	✔	✔	✔
Supplement dust palliative or aggregate with watering if necessary	✔	✔	✔	✔

BMP: TRENCHING

CST 21

Trenching with track or wheel mounted excavator, shovel, backhoe or trencher

REQUIREMENTS

- Stabilize surface soils where trencher or excavator and support equipment and vehicles will be operated.
- Stabilize soils at the completion of project.
- Limit fugitive dust emissions during trenching operations to opacity and visible plume requirements of Section 94.6.8.

CONTROL MEASURES FOR ALL SOIL TYPES

21-1. Presoak subsurface soils.

21-2. Prewet surface soils where trenching and support equipment and vehicles will be operated.

21-3. Wash mud and soil from equipment at completion of trench to prevent crusting and drying of soil on equipment.

21-4. Use water to form crust on excavated soil windrow as it is formed.

21-5. Use water and dust palliative to form crust on excavated soil windrow as it is formed.

CONTROL MEASURES FOR SPECIFIC SOIL TYPES

<u>High- Non-Caliche Areas</u>

21-6. Presoak with water and surfactant mixture using sprinklers or wobblers.

21-7. Presoak with water and surfactant mixture using water truck/pull.

21-8. Pre-water surface, pre-trench to 18” depth, soak soils via pre-trench prior to deep trenching.

21-9. Complete trenching, maintaining water as needed to prevent dust.

High - Caliche Areas

21-10. Use water truck in conjunction with trenching machine.

21-11. Use spray nozzles mounted on trenching machine.

21-12. Use water truck with water/surfactant mixture.

Moderate High - Non-Caliche Areas

21-13. Presoak soil with water and tackifier mixture using sprinklers or wobblers.

21-14. Presoak soil with water and tackifier mixture using water truck/pull.

21-15. Pre-water surface, pre-trench to 18" depth, soak soils via pre-trench prior to deep trenching.

21-16. Complete trenching, maintaining water as needed to prevent dust.

Moderate High - Caliche Areas

21-17. Use water truck in conjunction with trenching machine.

21-18. Use spray nozzles mounted on trenching machine.

21-19. Use water truck with water/tackifier mixture.

Moderate Low and Low - Non-Caliche Areas

21-20. Presoak soil with water using sprinklers or wobblers.

21-21. Presoak with water, using water truck/pull.

21-22. Pre-water surface, pre-trench to 18" depth, soak soils via pre-trench prior to deep trenching.

21-23. Complete trenching, maintaining water as needed to prevent dust.

Moderate Low and Low - Caliche Areas

21-24. Use water truck in conjunction with trenching machine.

21-25. Use spray nozzles mounted on trenching machine.

21-26. Use water truck.

BMP: TRENCHING (continued)

CST 21

	Particulate Emission Potential			
	High	Moderate High	Moderate Low	Low
Stabilize surface soils where trencher or excavator will operate	✓	✓	✓	✓
In caliche areas, use water truck in conjunction with trenching machine or excavator	✓	✓	✓	✓
In caliche areas, use spray nozzles mounted on trenching machine	✓	✓	✓	✓
Presoak with water and surfactant	✓			
Presoak with water and tackifier		✓		
Presoak with water			✓	✓
Form crust on excavated soil windrow	✓	✓	✓	✓

BMP: TRUCK LOADING CST 22

Truck Loading

REQUIREMENTS

- Stabilize material to limit emissions to opacity and visible plume requirements of Section 94.6.8.
- Cover all loads on public roadways.

CONTROL MEASURES FOR ALL SOIL TYPES

22-1. Empty loader bucket slowly.

22-2. Keep loader bucket close to the truck to minimize the drop height while dumping.

CONTROL MEASURES FOR SPECIFIC SOIL TYPES

High

22-3. Mix material with water and surfactant mixture prior to loading.

22-4. Spray material with water and surfactant mixture while loading.

Moderate High

22-5. Mix material with water and tackifier mixture prior to loading.

22-6. Spray material with water and tackifier mixture while loading.

Moderate Low and Low

22-7. Mix material with water prior to loading.

22-8. Spray material with water while loading.

BMP: TRUCK LOADING (continued)

CST 22

	Particulate Emission Potential			
	High	Moderate High	Moderate Low	Low
Cover all loads	✓	✓	✓	✓
Empty loader slowly and minimize drop height while dumping	✓	✓	✓	✓
Mix material with water and surfactant mixture prior to loading and spray material while loading	✓			
Mix material with water and tackifier mixture prior to loading and spray material while loading		✓		
Mix material with water prior to loading and spray material with water while loading			✓	✓