Figure: 30 TAC §17.14(a)

Tier I Table The property listed in this table is property that the executive director has determined is used wholly or partly for pollution control purposes when used as shown in the Description section of the table and when no marketable product arises from using the property, except heat recovery steam generators listed as a partial use percentage. The items listed are described in generic terms without the use of brand names or trademarks. The use percentages on all property on the table are established based on standard uses of the pieces of equipment involved. If the executive director determines that the equipment is not being used in a standard manner (e.g., use in production or recovery of a marketable product), the executive director may require that a Tier III application, using the Cost Analysis Procedure, be filed by the applicant to calculate the appropriate use determination percentage. For items where the description limits the use determination to the incremental cost difference, the cost of the property or device with the pollution control feature is compared to a similar device or property without the pollution control feature. The table is a list adopted under Texas Tax Code, §11.31(g).

*Air Pollution Control Equipment*

Particulate control Devices

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-1 | Air | Dust Collection Systems | Structures containing filters, blowers, ductwork - used to remove particulate matter from exhaust gas streams in order to prevent release of particulate matter to ambient air. | 100 |
| A-2 | Air | Demisters or Mist Eliminators Added | Mesh pads or cartridges - used to remove entrained liquid droplets from exhaust gas streams. | 100 |
| A-3 | Air | Electrostatic Precipitators | Wet or dry particulate collection created by an electric field between positive or negative electrodes and collection surface. | 100 |
| A-4 | Air | Dry Cyclone Separators | Single or multiple inertial separators with blowers and ductwork used to remove particulate matter from exhaust gas streams. | 100 |
| A-5 | Air | Scrubbers | Wet collection device using spray chambers, wet cyclones, packed beds, orifices, venturi, or high- pressure sprays to remove particulates and chemicals from exhaust gas streams. System may include pumps, ductwork, and blowers needed for the equipment to function. | 100 |

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-6 | Air | Water/ Chemical Sprays and Enclosures for Particulate Suppression | Spray nozzles, conveyor and chute covers, windshields, piping, and pumps used to reduce fugitive particulate emissions. | 100 |
| A-7 | Air | Smokeless Ignitors | Installed on electric generating units to control particulate emissions and opacity on start-up. | 100 |

Combustion Based Control Devices

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-20 | Air | Thermal Oxidizers | Thermal destruction of air pollutants by direct flame combustion. | 100 |
| A-21 | Air | Catalytic Oxidizer | Thermal destruction of air pollutants that uses a catalyst to promote oxidation. | 100 |
| A-22 | Air | Flare/Vapor Combustor | Stack, burner, flare tip, and blowers used to destroy air contaminants in a vent gas stream. | 100 |

Non-Volatile Organic Compounds Gaseous Control Devices

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-40 | Air | Molecular Sieve | Microporous filter used to remove hydrogen sulfide ($H_2S$) or nitrogen oxides ($NO_x$) from a waste gas stream. | 100 |
| A-41 | Air | Strippers Used in Conjunction with Final Control Device | Stripper, with associated pumps, piping - used to remove contaminants from a waste gas stream or waste liquid stream. | 100 |
| A-42 | Air | Chlorofluorocarbon (CFC) Replacement Projects | Projects to replace one CFC with an environmentally cleaner CFC or other refrigerant where there is no increase in the cooling capacity or the efficiency of the unit. Includes all necessary equipment needed to replace the CFC and achieve the same level of cooling capacity. | 100 |
| A-43 | Air | Halon Replacement Projects | All necessary equipment needed to replace the Halon in a fire suppression system with an environmentally cleaner substance. | 100 |

Monitoring and Sampling Equipment

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-60 | Air | Fugitive Emission Monitors | Organic vapor analyzers - used to discover leaking piping components. | 100 |

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-61 | Air | Continuous & Noncontinuous Emission Monitors | Monitors, analyzers, buildings, air conditioning equipment, and optical gas imaging instruments used to demonstrate compliance with emission limitations of regulated air contaminants, (including flow and diluent gas monitors and dedicated buildings). | 100 |
| A-62 | Air | Monitoring Equipment on Final Control Devices | Temperature monitor or controller, flow-meter, pH meter, and other meters for a pollution control device. Monitoring of production equipment or processes is not included. | 100 |
| A-63 | Air | On or Off-Site Ambient Air Monitoring Facilities | Towers, structures, analytical equipment, sample collectors, monitors, and power supplies used to monitor for levels of contaminants in ambient air. | 100 |
| A-64 | Air | Noncontinuous Emission Monitors, Portable | Portable monitors, analyzers, structures, trailers, air conditioning equipment, and optical gas imaging instruments used to demonstrate compliance with emission limitations. | 100 |
| A-65 | Air | Predictive Emission Monitors | Monitoring of process and operational parameters that are used solely to calculate or determine compliance with emission limitations. | 100 |
| A-66 | Air | Sampling Ports | Construction of stack or tower sampling ports used for emission sampling or for the monitoring of process or operational parameters that are used to calculate or determine compliance with emission limitations. | 100 |
| A-67 | Air | Automotive Dynamometers | Automotive dynamometers used for emissions testing of fleet vehicles. | 100 |

Nitrogen Oxides Controls

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-80 | Air | Selective Catalytic and Non-catalytic Reduction Systems | Catalyst bed, reducing agent injection and storage, monitors - used to reduce nitrogen oxides ($NO_x$) emissions from combustion sources. Non-catalytic systems use a reducing agent without a catalyst. | 100 |
| A-81 | Air | Catalytic Converters for Stationary Sources | Used to reduce $NO_x$ emissions from internal combustion engines. | 100 |
| A-82 | Air | Air/Fuel Ratio Controllers for Piston-Driven Internal Combustion Engines | Used to control the air/fuel mixtures and reduce $NO_x$ formation for fuel injected, naturally aspirated, or turbocharged engines. | 100 |
| A-83 | Air | Flue Gas Recirculation | Ductwork and blowers used to redirect part of the flue gas back to the | 100 |

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| | | | combustion chamber for reduction of $NO_x$ formation. May include fly ash collection in coal fired units. | |
| A-84 | Air | Water/Steam Injection | Piping, nozzles, and pumps to inject water or steam into the burner flame of utility or industrial burners or the atomizer ports for gas turbines, used to reduce $NO_x$ formation. | 100 |
| A-85 | Air | Over-fire Air & Combination of asymmetric over-fire air with the injection of anhydrous ammonia or other pollutant-reducing agents | The asymmetric over- fire air layout injects preheated air and anhydrous ammonia or other pollutant-reducing agent through nozzles through a series of ducts, dampers, expansion joints, and valves. | 100 |
| A-86 | Air | Low-$NO_x$ Burners | Installation of low-$NO_x$ burners. The eligible portion is the incremental cost difference. For a replacement burner, the incremental cost difference is calculated by comparing the cost of the new burner with the cost of the existing burner. For new installations, the incremental cost difference is calculated by comparing the cost of the new burner to the cost of a similarly sized burner without $NO_x$ controls from the most recent generation of burners. | 100 |
| A-87 | Air | Water Lances | Installed in the fire box of boilers and industrial furnaces to eliminate hot spots, thereby reducing $NO_x$ formation. | 100 |
| A-88 | Air | Electric Power Generation Burner Retrofit | Retrofit of existing burners on electric power generating units with components for reducing $NO_x$ including directly related equipment. | 100 |
| A-89 | Air | Wet or Dry Sorbent Injection Systems | Use of a sorbent for flue gas desulfurization or $NO_x$ control. | 100 |
| A-90 | Air | Dry Low-$NO_x$ Emission Systems | Equipment installed on natural gas-fired compression turbines to reduce $NO_x$ emissions including combustor liners, injectors, fuel conditioning system, fuel ring, fuel control valve, pilot valve, sensors, controls, fuel gas treater, fuel nozzle assemblies, transition piece assemblies, cap assemblies, inner crossfire tubes and outer crossfire tubes. | 100 |
| A-91 | Air | Lean-Burn Portions of Reciprocating Engines | Turbocharger, fuel injection system consisting of fuel nozzles positioned within a pre-combustion chamber, and pre-combustion chamber for engines. | 100 |
| A-92 | Air | Heat Recovery Steam Generators | A boiler designed to capture waste heat from combustion turbine exhaust for the | 65 |

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| | | | generation of steam while reducing unit output-based emissions. | |

Volatile Organic Compounds Control

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-110 | Air | Carbon Adsorption Systems | Carbon beds or liquid-jacketed systems, blowers, piping, condensers - used to remove volatile organic compounds (VOC) emissions and odors from exhaust gas streams. | 100 |
| A-111 | Air | Storage Tank Secondary Seals and Internal Floating Roofs | Used to reduce VOC emissions caused by evaporation losses from aboveground storage tanks. | 100 |
| A-112 | Air | Replacement of Existing Pumps, Valves, or Seals in Piping Service | The incremental cost difference between the cost of the original equipment and the replacement equipment is eligible only when the replacement of these parts is done for the sole purpose of eliminating fugitive VOC emissions. New systems do not qualify for this item. | 100 |
| A-113 | Air | Welding of Pipe Joints in VOC Service (Existing Pipelines) | Welding of existing threaded or flanged pipe joints to eliminate fugitive emission leaks. | 100 |
| A-114 | Air | Welding of Pipe Joints in VOC Service (New Construction) | The incremental cost difference between the cost of using threaded or flanged joints and welding of pipe joints in VOC service. | 100 |
| A-115 | Air | External Floating Roofs | Used to reduce VOC emissions caused by evaporation losses from aboveground storage tanks. Must be installed to meet or exceed §115.112 of this title (relating to Control Requirements). | 100 |
| A-116 | Air | Fixed Storage Tank Roofs | Fixed roofs installed on external floating roof tanks used to store any product containing VOC as an additional VOC control measure. | 100 |
| A-117 | Air | Geodesic Domes | Geodesic domes installed on external floating roof storage tanks as a means of controlling VOC emissions. | 100 |
| A-118 | Air | Submerged Fill Pipes | Submerged fill pipes installed in storage tanks used to store any product containing VOC. | 100 |
| A-119 | Air | Dual Mechanical Pump Seals | The incremental cost difference between the cost of dual mechanical seal pumps and comparable single sealed pumps. | 100 |
| A-120 | Air | Seal-Less Pumps | The incremental cost difference between the cost of seal-less pumps and the cost of similarly sized pumps with seals. | 100 |

Mercury Control

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-130 | Air | Sorbent Injection Systems | Sorbents sprayed into the flue gas that chemically react to absorb mercury. The sorbents are then removed by a particulate removal device. Equipment may include pumps, tanks, blowers, nozzles, ductwork, hoppers, and particulate collection devices needed for the equipment to function. | 100 |
| A-131 | Air | Fixed Sorbent Systems | Equipment, such as stainless steel plate with a gold coating that is installed in the flue gas to absorb mercury. | 100 |
| A-132 | Air | Mercury Absorbing Filters | Filters that absorb mercury such as those using the affinity between mercury and metallic selenium. | 100 |
| A-133 | Air | Oxidation Systems | Equipment used to change elemental mercury to oxidized mercury. This can be catalysts (similar to Selective Catalytic Reduction (SCR) catalyst) or chemical additives that can be added to the flue gas or directly to the fuel. | 100 |
| A-134 | Air | Photochemical Oxidation | Use of an ultraviolet light from a mercury lamp to provide an excited state mercury species in flue gas, leading to oxidation of elemental mercury. These units are only eligible if mercury is removed from flue gas. | 100 |
| A-135 | Air | Chemical Injection Systems | Equipment used to inject chemicals into the combustion zone or flue gas that chemically bonds mercury to the additive, which is then removed in a particulate removal device. | 100 |

Sulfur Oxides Controls

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-160 | Air | Wet and Dry Scrubbers | Circulating fluid bed and moving bed technologies using a dry sorbent or various wet scrubber designs that inject a wet sorbent into the scrubber. | 100 |
| A-161 | Air | Selective Catalytic and Non-catalytic Reduction Systems | Catalyst bed, reducing agent injection and storage, monitors - used to reduce sulfur oxide emissions from combustion sources. Non-catalytic systems use a reducing agent without a catalyst. | 100 |

Miscellaneous Control Equipment

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| A-180 | Air | Hoods, Duct and Collection Systems connected to Final Control Devices | Piping, headers, blowers, hoods, and ducts used to collect air contaminants and route them to a control device. | 100 |
| A-181 | Air | Stack Modifications | Construction of stack extensions to meet a permit requirement. | 100 |
| A-182 | Air | New Stack Construction | The incremental cost difference between the stack height required for production purposes and the stack height required for pollution control purposes. | 100 |
| A-183 | Air | Stack Repairs | Repairs made to an existing stack for that stack to provide the same level of pollution control as was previously provided. | 100 |
| A-184 | Air | Vapor/Liquid Recovery Equipment (for venting to a control device) | Piping, blowers, vacuum pumps, and compressors used to capture a waste gas or liquid stream and vent to a control device, including those used to eliminate emissions associated with loading tank trucks, rail cars, and barges. | 100 |
| A-185 | Air | Paint Booth Control Devices | Pollution control equipment associated with the paint booth - including the items such as the control device, water curtain, filters, or other devices to capture paint fumes. | 100 |
| A-186 | Air | Blast Cleaning System - Connected to a Control Device | Particulate control device and blast material recycling system. | 100 |
| A-187 | Air | Amine or Chilled Ammonia Scrubber | Installed to provide post combustion capture of pollutants (including carbon dioxide ($CO_2$) upon the effective date of a final rule adopted by the United States Environmental Protection Agency (EPA) regulating $CO_2$ as a pollutant). | 100 |
| A-188 | Air | Catalyst-based Systems | Installed to allow the use of catalysts to reduce pollutants in emission streams. | 100 |
| A-189 | Air | Enhanced Scrubbing Technology | Installed to enhance scrubber performance, including equipment that promotes the oxidation of elemental mercury in the flue gas prior to entering the scrubber. | 100 |
| A-190 | Air | Airless Paint Spray Gun | The incremental cost difference between an airless paint spray gun and a comparable standard air powered paint spray gun. | 100 |

*Water and Wastewater Pollution Control Equipment*

Solid Separation and De-watering

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| W-1 | Water | API Separator | Separates oil, water, and solids by settling and skimming. | 100 |
| W-2 | Wastewater | CPI Separator | Mechanical oil, water, and solids separator. | 100 |
| W-3 | Wastewater | Dissolved Air Flotation | Mechanical oil, water, and solids separator. | 100 |
| W-4 | Wastewater | Skimmer | Used to remove hydrocarbon from process wastewater. | 100 |
| W-5 | Wastewater | Decanter | Used to decant hydrocarbon from process wastewater. | 100 |
| W-6 | Wastewater | Belt Press, Filter Press, or Plate and Frame | Mechanical de-watering devices. | 100 |
| W-7 | Water | Centrifuge | Separation of liquid and solid waste by centrifugal force, typically a rotating drum. | 100 |
| W-8 | Water | Settling Basin | Simple tank or basin for gravity separation of suspended solids. | 100 |
| W-9 | Water | Equalization | Tank, sump, or headbox used to settle solids and equilibrate process wastewater streams. | 100 |
| W-10 | Water | Clarifier | Circular settling basins usually containing surface skimmers and sludge removal rakes. | 100 |

Disinfection

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| W-20 | Water | Chlorination | Wastewater disinfection treatment using chlorine | 100 |
| W-21 | Water | De-chlorination | Equipment for removal of chlorine from water or wastewater. | 100 |
| W-22 | Water | Electrolytic Disinfection | Disinfect water by the use of electrolytic cells. | 100 |
| W-23 | Water | Ozonization | Equipment that generates ozone for the disinfection of wastewater. | 100 |
| W-24 | Water | Ultraviolet | Disinfection of wastewater by the use of ultraviolet light. | 100 |
| W-25 | Water | Mixed Oxidant Solution | Solution of chlorine, chlorine dioxide, and ozone to replace chlorine for disinfection. | 100 |

Biological Systems

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| W-30 | Water | Activated Sludge | Wastewater treatment using microorganisms to metabolize biodegradable organic matter in aqueous waste streams. Can include tanks, aeration equipment, clarifiers, and equipment used to handle sludge. | 100 |
| W-31 | Water | Adsorption | Use of activated carbon to remove organic contaminants from wastewater. | 100 |
| W-32 | Water | Aeration | Passing air through wastewater to increase oxygen available for bacterial activities that remove contaminants. | 100 |
| W-33 | Water | Rotary Biological Contactor | Use of large rotating discs that contain a bio- film of microorganisms that promote biological purification of the wastewater. | 100 |
| W-35 | Water | Trickling Filter | Fixed bed of highly permeable media in which wastewater passes through and forms a slime layer to remove contaminants. | 100 |
| W-36 | Water | Wetlands and Lagoons (artificial) | Artificial marsh, swamp, or pond that uses vegetation and natural microorganisms as bio- filters to remove sediment and other pollutants from wastewater or stormwater. | 100 |
| W-37 | Water | Digester | Enclosed, heated tanks for treatment of sludge that is broken down by bacterial action. | 100 |

Other Equipment

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| W-50 | Water | Irrigation | Equipment that is used to disburse treated wastewater through irrigation on the site. | 100 |
| W-51 | Water | Outfall Diffuser | Device used to diffuse effluent discharge from an outfall. | 100 |
| W-52 | Water | Activated Carbon Treatment | Use of carbon media such as coke or coal to remove organics and particulate from wastewater. May be used in either fixed or fluidized beds. | 100 |
| W-53 | Water | Oxidation Ditches and Ponds | Process of pumping air bubbles into a pond to assist in oxidizing organic and mineral pollution. | 100 |
| W-54 | Water | Filters: Sand, Gravel, or Microbial | Passing wastewater through a sand or gravel bed to remove solids and reduce bacteria. | 100 |
| W-55 | Water | Chemical Precipitation | Process used to remove heavy metals from wastewater. | 100 |

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| W-56 | Water | Ultra-filtration | Use of semi-permeable membrane and hydrostatic pressure to filter solids and high molecular weight solutes from wastewater. | 100 |
| W-57 | Water | Conveyances, Pumps, Sumps, Tanks, Basins | Used to segregate storm water from process water, control storm water runoff, or convey contaminated process water. | 100 |
| W-58 | Water | Water Recycling Systems | Installed systems, excluding cooling towers, that clean, recycle, or reuse wastewater or use gray water or storm water to reduce the amount of a facility's discharge or the amount of new water used as process or make-up water including Zero Discharge Systems. | 100 |
| W-59 | Water | Wastewater Treatment Facility/Plant | New wastewater treatment facilities (including on-site septic systems) constructed to process wastewater generated on site. | 100 |
| W-60 | Water | High-Pressure Reverse Osmosis | The passing of a contaminated water stream over a permeable membrane at high pressure to collect contaminants. | 100 |
| W-61 | Water | Hydro-cyclone Vapor Extraction | An air-sparged hydro-cyclone for the removal of VOCs from a wastewater stream. | 100 |
| W-62 | Water | Recycled Water Cleaning System | Equipment used to collect and recycle the water used in a high-pressure water system for cleaning contaminants from equipment and pavement. | 100 |
| W-63 | Water | Chemical Oxidation | Use of hydrogen peroxide or other oxidants for wastewater treatment. | 100 |
| W-64 | Water | Storm Water Containment Systems | Structures or liners used for containment of runoff from rainfall. The land that is actually occupied by the containment structure is eligible for a positive use determination. | 100 |
| W-65 | Water | Wastewater Impoundments | Ponds used for the collection of water after use and before circulation. | 100 |
| W-66 | Water | Oil/Water Separator | Mechanical device used to separate oils from storm water. | 100 |

Control/Monitoring Equipment

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| W-70 | Water | pH Meter, Dissolved Oxygen Meter, or Chart Recorder | Used for wastewater operations control and monthly reporting requirements. | 100 |
| W-71 | Water | On-line Analyzer | Device that conducts chemical analysis on sample streams for wastewater operations control. | 100 |
| W-72 | Water | Neutralization | Control equipment used to adjust pH of wastewater treatment components. | 100 |
| W-73 | Water | Respirometer | Device used to measure oxygen uptake or $CO_2$ release in wastewater treatment systems. | 100 |
| W-74 | Water | Diversion | Structures used for the capture and control of storm water and process wastewater or emergency diversion of process material. Land means only land that is actually occupied by the diversion or storage structure. | 100 |
| W-76 | Water | Building | Used for housing wastewater control and monitoring equipment. | 100 |
| W-77 | Water | De-foaming Systems | Systems consisting of nozzles, pilings, spray heads, and piping used to reduce surface foam. | 100 |

*Solid Waste Management Pollution Control Equipment*

Solid Waste Management

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| S-1 | Land / Water | Stationary Mixing and Sizing Equipment | Immobile equipment used for solidification, stabilization, or grinding of self-generated waste material for the purpose of disposal. | 100 |
| S-2 | Land / Water | Decontamination Equipment | Equipment used to remove waste contamination or residues from vehicles that leave the facility. | 100 |
| S-3 | Land / Water | Solid Waste Incinerator (not used for energy recovery and export or material recovery) | Solid waste incinerators, feed systems, ash handling systems, and controls. | 100 |
| S-4 | Land / Water / Air | Monitoring and Control Equipment | Alarms, indicators, and controllers, for high liquid level, pH, temperature, or flow in waste treatment system. Does not include fire alarms. | 100 |
| S-5 | Land / Water | Solid Waste Treatment Vessels | Any vessel used for waste treatment. | 100 |

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| S-6 | Land / Water | Secondary Containment | External structure or liner used to contain and collect liquids released from a primary containment device and/or ancillary equipment. Main purpose is to prevent groundwater or soil contamination. | 100 |
| S-7 | Land / Water | Liners (Noncommercial Landfills and Impoundments) | A continuous layer or layers of natural and/or man-made materials that restrict downward or lateral escape of wastes or leachate in an impoundment or landfill. | 100 |
| S-8 | Land / Water | Leachate Collection and Removal Systems | A system capable of collecting leachate or liquids, including suspended solids, generated from percolation through or drainage from a waste. Systems for removal of leachate may include sumps, pumps, and piping. | 100 |
| S-9 | Land/ Water | Leak Detection Systems | A system capable of detecting the failure of a primary or secondary containment structure or the presence of a liquid or waste in a containment structure. | 100 |
| S-10 | Land/ Water | Final Cover Systems for Landfills (Noncommercial) | A system of liners and materials to provide drainage, erosion prevention, infiltration minimization, gas venting, and a biotic barrier. | 100 |
| S-11 | Land/ Water | Lysimeters | An unsaturated zone monitoring device used to monitor soil-pore liquid quality at a waste management unit (e.g., below the treatment zone of a land treatment unit). | 100 |
| S-12 | Water | Groundwater Monitoring Well and Systems | A groundwater well or system of wells designed to monitor the quality of groundwater at a waste management unit (e.g., detection monitoring systems or compliance monitoring systems). | 100 |
| S-13 | Air | Fugitive Emission Monitors | A monitoring device used to monitor or detect fugitive emissions from a waste management unit or ancillary equipment. | 100 |
| S-14 | Land / Water | Slurry Walls/Barrier Walls | A pollution control method using a barrier to minimize lateral migration of pollutants in soils and groundwater. | 100 |
| S-15 | Water | Groundwater Recovery or Remediation System | A groundwater remediation system used to remove or treat pollutants in contaminated groundwater or to contain pollutants (e.g., pump-and-treat systems). | 100 |
| S-16 | Water | Noncommercial Injection Wells (Including Saltwater Disposal Wells) and Ancillary Equipment | Injection well, pumps, collection tanks and piping, pretreatment equipment, and monitoring equipment. | 100 |

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| S-17 | Land / Water | Noncommercial Landfills (used for disposal of self - generated waste materials) and Ancillary Equipment | Excavation, clay and synthetic liners, leak detection systems, leachate collection and treatment equipment, monitor wells, waste hauling equipment, decontamination facilities, security systems, and equipment used to manage the disposal of waste in the landfill. | 100 |
| S-18 | Land / Water | Resource Conservation Recovery Act Containment Buildings (used for storage or treatment of hazardous waste) | Pads, structures, solid waste treatment equipment used to meet the requirements of 30 TAC Chapter 335, Subchapter O – Land Disposal Restrictions, §335.431. | 100 |
| S-19 | Land / Water | Surface Impoundments and Ancillary Equipment (Including Brine Disposal Ponds) | Excavation, ponds, clay and synthetic liners, leak detection systems, leachate collection and treatment equipment, monitor wells, and pumps. | 100 |
| S-20 | Land / Water | Waste Storage Used to Collect and/or Store Waste Prior to Treatment or Disposal | Tanks, containers and ancillary equipment such as pumps, piping, secondary containment, and vent controls (e.g., Resource Conservation Recovery Act Storage Tanks, 90-Day Storage Facilities, Feed Tanks to Treatment Facilities). | 100 |
| S-21 | Air | Fugitive Emission Containment Structures | Structures or equipment used to contain or reduce fugitive emissions or releases from waste management activities (e.g., coverings for conveyors, chutes, enclosed areas for loading and unloading activities). | 100 |
| S-22 | Water | Double-Hulled Barge | If double-hulled to reduce chance of leakage into public waters, calculate the incremental cost difference between a single-hulled barge and a double-hulled barge. | 100 |
| S-23 | Land | Composting Equipment | Used to compost material where the compost will be used on site. (Does not include commercial composting facilities.) | 100 |
| S-24 | Land | Compost Application Equipment | Equipment used to apply compost that has been generated on-site. | 100 |
| S-25 | Land | Vegetated Compost Sock | Put in place as part of a facility's permanent Best Management Plan (BMP). | 100 |
| S-26 | Air | Foundry Sand Reclamation Systems for Foundries | Components of a sand reclamation system that provide specific pollution control. Includes hooding over shaker screens vented to a dust collector, conveyor covers, and emission control devices at other points. | 100 |
| S-27 | Air / Water / Land | Concrete Reclaiming Equipment | Processes mixed, un-poured concrete batches to reclaim the sand and gravel for reuse and recycles the water in a closed loop system. | 100 |

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| S-28 | Land | Fencing installed for the control of windblown trash or access control. | Fencing installed at landfills, solid waste transfer stations, or storage/treatment areas located at hazardous waste management facilities to meet environmental regulations. | 100 |
| S-29 | Land / Water | Reclamation Equipment | Construction type equipment such as dozers, front-end loaders and dump trucks used exclusively for land reclamation. Does not include commercial reclamation equipment. | 100 |

*Miscellaneous Pollution Control Equipment*

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| M-1 | Air / Land / Water | Spill Response/ Cleanup Equipment Pre-positioned and Stored for Addressing Future Emergencies | Boats, barges, booms, skimmers, trawls, pumps, power units, packaging materials and containers, vacuum trailers, storage sheds, diversion basins, tanks, and dispersants. | 100 |
| M-2 | Air / Land | Hazardous Air Pollutant Abatement Equipment - required removal material contaminated with asbestos, lead, or some other hazardous air pollutant | High-Efficiency Particulate Arresting (HEPA) Vacuum Equipment, Negative Air Pressure Enclosures, Glove Bags, and Disposal Containers. | 100 |
| M-3 | Air / Land / Water | Vacuum Trucks, Street Sweepers and Watering Trucks | Mobile Surface Cleaning Equipment - used exclusively to control particulate matter on plant roads. (Does not include sweepers or scrubbers used to control particulate matter within buildings.) | 100 |
| M-4 | Land | Compactors, Barrel Crushers, Balers, Shredders | Compactors and similar equipment used to change the physical format of waste material for recycling/reuse purposes or on-site disposal of facility-generated waste. | 100 |
| M-5 | Air / Land / Water | Solvent Recovery Systems | Used to remove hazardous content from waste solvents by heat, vaporization, and condensation, by filtration, or by other means. The recycled solvents must be reused at the facility generating the waste. | 100 |
| M-6 | Land / Water | Boxes, Bins, Carts, Barrels, Storage Bunkers | Collection/storage containers for source-separation of materials to be recycled or reused. Does not include product storage containers or facilities. | 100 |
| M-7 | Air | Environmental Paving Located at Industrial Facilities | Paving of outdoor vehicular traffic areas in order to meet or exceed an adopted air quality rule, regulation, or law. Does not include paving of parking areas or driveways for convenience purposes or storm water control. Does not include dirt or gravel. Value of the paving must be stated on a square foot basis with a plot plan provided that shows the paving in question. | 100 |
| M-8 | Air / Land / Water | Sampling Equipment | Equipment used to collect samples of exhaust gas, wastewater, soil, or other solid waste to be analyzed for specific contaminants or pollutants. | 100 |
| M-9 | Water | Dry Stack Building for Poultry Litter | A pole-barn type structure used to temporarily store poultry litter in an environmentally safe manner. | 100 |
| M-10 | Land / Water | Poultry Incinerator | Incinerators used to dispose of poultry carcasses. | 100 |

| | | | | |
|---|---|---|---|---|
| M-11 | Land / Water | Structures, Enclosures, Containment Areas, Pads for Composting Operations | Required to meet 'no exposure' storm water regulations. | 100 |
| M-12 | Air | Methane Capture Equipment | Equipment used to capture methane generated by the decomposition of waste material on site. Methane must be sent to a control device rather than used. | 100 |
| M-13 | Land | Drilling Mud Recycling System | Consisting of only the Shaker Tank System, Shale Shakers, Desilter, Desander, and Degasser. | 100 |
| M-14 | Land | Drilling Rig Spill Response Equipment | Includes only the Ram Type Blowout Preventers, Closing Units, and Choke Manifold Systems. | 100 |
| M-15 | Air | Odor Neutralization and Chemical Treatment Systems | Carbon adsorption, zeolite adsorption, and other odor neutralizing and chemical treatment systems to meet local ordinance or to prevent/correct nuisance odors at off-site receptors. | 100 |
| M-16 | Air | Odor Dispersing and Removal Systems | Electrostatic precipitators, vertical dispersing fans, stack extensions, and other physical control equipment used to dilute, disperse, or capture nuisance odor vent streams. | 100 |
| M-17 | Air | Low $NO_X$ Combustion System for Drilling Rigs | Equipment on power generating units designed solely to reduce $NO_X$ generation | 100 |
| M-18 | Air | Odor Detectors | Olfactometers, gas chromatographs, and other analytical instrumentation used specifically for detecting and measuring ambient odor, either empirically or chemical specific. | 100 |
| M-19 | Land | Cathodic Protection | Cathodic protection installed to prevent corrosion of metal tanks and piping. | 100 |
| M-20 | Water | Fish and Other Aquatic Organism Protection Equipment | Equipment installed to protect fish and other aquatic organisms from entrainment or impingement in an intake cooling water structure. Equipment includes: Aquatic Filter Barrier Systems, Fine-Mesh Traveling Intake Screens, Fish Return Buckets, Sprays, Flow-Altering Louvers, Fish Trough, Fish Behavioral Deterrents, and Wetland Creation. | 100 |
| M-21 | Water / Land | Double-walled Piping | The difference between cost of single walled piping and the cost of double-walled piping, when the double-walled piping is installed to prevent unauthorized discharges. | 100 |
| M-22 | Water / Land | Double-walled Tanks | The difference between cost of single walled tanks and the cost of double-walled tanks, when the double-walled tanks are installed to prevent unauthorized discharges. | 100 |

| | | | | |
|---|---|---|---|---|
| M-23 | Land / Water / Air | Remote Controlled Block Valves | Valves installed on pipelines used to transport hydrocarbons and natural gas as a spill control measure. | 100 |
| M-24 | Land / Water | Nondestructive Pipeline Testing | Expenditures for nondestructive pipeline testing such as radiography. Expenditures for non-pollution control purposes are not included. | 100 |

*Equipment Located at Tank Installations including Service Stations*

Spill and Overfill Prevention Equipment

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| T-1 | Water | Tight Fill Fittings | Liquid tight connections between the delivery hose and fill pipe. | 100 |
| T-2 | Water | Spill Containers | Spill containment manholes equipped with either a bottom drain valve to return liquids to the tank or a hand pump for liquid removal. | 100 |
| T-3 | Water | Automatic Shut-off Valves | Flapper valves installed in the fill pipe to automatically stop the flow of product. | 100 |
| T-4 | Water | Overfill Alarms | External signaling device attached to an automatic tank gauging system. | 100 |
| T-5 | Water | Vent Restriction Devices | Float vent valves or ball float valves to prevent backflow through vents. | 100 |

Secondary Containment

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| T-10 | Water | Double-walled Tanks | The difference between cost of single-walled tanks and the cost of double-walled tanks, when the double-walled tanks are installed to prevent unauthorized discharges or leaks. | 100 |
| T-11 | Water | Double-walled Piping | The difference between cost of single-walled piping and the cost of double-walled piping, when the double-walled piping is installed to prevent unauthorized discharges or leaks. | 100 |
| T-12 | Water | Tank Top Sumps | Liquid tight containers to contain leaks or spills that involve tank top fittings and equipment. | 100 |
| T-13 | Water | Under Dispenser Sumps | Contains leaks and spills from dispensers and pumps. | 100 |
| T-14 | Water | Sensing Devices | Installed to monitor for product accumulation in secondary containment sumps. | 100 |

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| T-15 | Land / Water | Concrete Paving Above Underground Tanks and Pipes | Required concrete paving located above underground pipes and tanks. The use determination value is limited to the difference between the cost per square foot of the concrete paving and the cost per square foot of the other paving installed at the service station. This item only applies to service stations. | 100 |

Release Detection for Tanks and Piping

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| T-20 | Water | Automatic Tank Gauging | Includes tank gauging probe and control console | 100 |
| T-21 | Water | Groundwater or Soil Vapor Monitoring | Observation wells located inside the tank excavation or monitoring wells located outside the tank excavation | 100 |
| T-22 | Water | Monitoring of Secondary Containment | Liquid sensors or hydrostatic monitoring systems installed in the interstitial space for tanks or piping | 100 |
| T-23 | Water | Automatic Line Leak Detectors | Devices installed at the pump that are designed to detect leaks in underground piping. Mechanical and electronic devices are acceptable. | 100 |
| T-24 | Water | Under Pump Check Valve | Valve installed to prevent back flow in the fuel dispensing line. This device is only used on suction pump piping systems. | 100 |
| T-25 | Water | Tightness Testing Equipment | Equipment purchased to comply with tank and/or piping tightness testing requirements. | 100 |

Cathodic Protection

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| T-30 | Water | Isolation Fittings | Dielectric bushings and fittings to separate underground piping from aboveground tanks and piping. | 100 |
| T-31 | Water | Sacrificial Anodes | Magnesium or zinc anodes packaged in low resistivity backfill to provide galvanic protection. | 100 |
| T-32 | Water | Dielectric Coatings | Factory installed coal-tar epoxies, enamels, fiberglass reinforced plastic, or urethanes on tanks and/or piping. Field installed coatings limited to exposed threads, fittings, and damaged surface areas. | 100 |

Emissions Control Equipment

| No. | Media | Property | Description | % |
|---|---|---|---|---|
| T-40 | Air | Stage I or Stage II Vapor Recovery | Includes pressure/vacuum vent relief valves, vapor return piping, stage 2 nozzles, coaxial hoses, vapor processing units, and vacuum- assist units. Used for motor vehicle fuel dispensing facilities. Does not include fuel delivery components of fuel dispensing unit. | 100 |