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Aggregate Production Operations (APOs): General Best Management Practices (BMPs)

If you own or operate a rock quarry, gravel pit, borrow pit, or similar APO, use these recommendations and resources on industry BMPs to preserve both air and water quality.

The following information is a proposal for a list of best management practices for certain operational issues at aggregate production operations (APO BMPs). TCEQ is publishing this proposal and asking any public stakeholders for feedback and comment. Any such feedback or comment must be provided to Jess Robinson, MC 175, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. Comments may also be submitted electronically. To be considered for this project, input must be received by 11:59 p.m. on January 24, 2025, and should reference "APO BMP List Proposal."

This page provides recommendations and resources on industry BMPs for APOs to reduce dust and waterborne sediment and pollutants, preserving both air and water quality. These BMPs do not supersede the actual language of TCEQ rules, regulations, or permits that may govern specific operations and facilities. Beyond your specific requirements, the BMPs provided here are for informational purposes and are not enforceable solely because they are on this list.

Be sure you are following the specific requirements that apply to your operation and/or its components or activities. Examples:

Stormwater discharges associated with an APO's activities require authorization commonly obtained under a general permit.

Emissions of air contaminants from a temporary rock crusher may require authorization, often under a standard permit.

Many aboveground storage tanks must be registered and operated under TCEQ's rules.

To find additional compliance information, visit [Dirt, Sand, and Rock Quarries and Aggregate Processing Plants: Compliance Resources](#).

To find the most current, official copy of state rules, contact the Secretary of State's office at 512-305-9623, or visit Title 30 of the Texas Administrative Code.

Operating Practices for APOs

Obtain the appropriate TCEQ authorization for your potential emissions source(s).

Be a Good Neighbor

The best way to avoid creating a dust nuisance is to avoid creating dust. Take all reasonable measures to avoid creating dust, and appropriately manage the dust you do produce.

Use water sprays, sprinklers, mists, or foams regularly to keep dust particles from being blown into the air. Review your permit or authorization for any specific requirements about the use of dust suppressant.

Cover dust sources in impermeable materials, such as roofing shingles or wettened tire chips.
Practice Good Housekeeping

Stay organized and tidy to reduce the risk of pollution. Examples:

Conducting equipment maintenance and repair in designated areas
Maintaining waste receptacles at convenient locations and collecting waste regularly
Securely storing chemicals, paints, solvents, fertilizers, and other potentially toxic or hazardous materials
Adequately maintaining sanitary facilities
Designating fuel dispensing areas equipped with spill kits
Select Appropriate Equipment

Use fuel-efficient and appropriately-sized equipment to reduce emissions, operation time, and the overall amount of dust you produce.

If your APO includes a rock crusher (or associated equipment), spraying water on it can help suppress dust; be sure you have spray bars installed at the inlet and outlet, at all shaker screens, and at all material transfer points.

Conduct Regular Street Cleaning

Regularly sweep or clean the site entrance, the public roadway fronting the site, and any paved roads on the site. This will reduce the amount of dust and sediment carried away in stormwater runoff.

Site Physical Features

Use Setback Distances and Buffer Zone(s)

The further dust-producing operations are from site boundaries, the less likely they will create a nuisance for any neighbors.

A naturally vegetated or replanted buffer area can help minimize erosion, protect water quality, and reduce the flow and velocity of stormwater. It may also block wind or reduce its speed, lessening the amount of dust blown off-site.

Vegetated buffer zones are most effective around the perimeter of an APO, or adjacent to sensitive environmental features or urban areas. Consider utilizing a combination of plants that are effective during all seasons.

Use Perimeter Controls

You can manage stormwater discharges by installing and maintaining perimeter controls, such as:

Check dams
Constructed wetlands
Ditches
Erosion control blankets
French drains
Retention basins

Silt fences
Straw bales
Slope drains
Riprap outlet protection
Berms
Dikes or swales
Minimize Sediment Leaving the Site

Cover vehicle cargo with tarpaulin, particularly aggregate cargo, to reduce the amount of dust and debris vehicles carry from the site.

Install a washing pit or trough before the property exit to reduce the amount of dust and sediment vehicles carry onto public roads.

All these methods can control erosion, sediment, and stormwater from the site.

Reduce Dust on Site Haul Roads

Temporary, semi-permanent, and permanent haul roads should be designed, constructed, maintained, and treated appropriately for airborne dust generated by traffic.

Ensure vehicles are driven at reasonable speeds to reduce dust disturbance.

Stockpiles, Screens, and Conveyors

Be sure your stockpiles are only as high as your permit allows.

Screens or conveyors longer than 300 feet should be covered.

Spraying water or dust-suppressant chemicals, as appropriate, can also help reduce dust emissions from stockpiles. Again, review your permit or authorization for any specific requirements about the proper use of dust suppressant.

Ponds

Ensure any water storage ponds are designed to be large enough and sturdy enough to meet demand. These designs should:

Consider accumulation of solids, stormwater runoff, and direct precipitation on the pond surface

Include a top freeboard of not less than 2 feet

Have side slopes of not more than 3:1 to allow access by a front-end loader to remove accumulated sediment.

Ponds that store certain types of process wastewater may require a protective impermeable liner, such as compacted clay, synthetic material, or concrete. Even if not required, such liners may help ponds contain the liquids they store and prevent contamination of underlying soil and groundwater.

Pond designs and installations may be subject to permitting requirements, and they should be certified by a professional licensed by the State of Texas in a field relevant for such features, such as environmental or civil engineering.

Ponds can also aid in water conservation, by collecting water for potential reuse. Please note that water reuse may require specific authorization from TCEQ.

Protect Groundwater Conditions

Groundwater includes water from aquifers that is transmitted to the surface. Certain APO activities may risk interacting with or contaminating nearby groundwater. To minimize this risk, operators should:

Check information on the Texas Water Development Board (TWDB) webpage and TCEQ's resources on water wells to determine if registered public or private drinking water supply wells are nearby. See TWDB's information about subsidence for more information about how land and its underground features can change.

Perform a visual check for possible unregistered or abandoned wells in the immediate vicinity of the APO. If an unregistered or abandoned well is discovered, operators should refer to TCEQ's regulatory guidance Landowner's Guide to Plugging Abandoned Water Wells (RG-347) for more information about next steps.

Contact your local TCEQ Regional Office TCEQ Regional Office to see what requirements or guidance regarding nearby aquifers may apply to your operation. If your APO is in the Edwards Aquifer regulated area, please contact EAPP@tceq.texas.gov to discuss any plan requirements.

Additional TCEQ Resources

BMPs for Sand Mining Operations in the San Jacinto River Watershed– RG–555

Complying with the Edwards Aquifer Rules: Technical Guidance on BMPs– RG–348

BMPs for Quarry Operations– RG–500

Surface Water Quality Segments Viewer

Public Water Systems (surface water and well intakes) Viewer

Requirements for Reclaimed Water

Resources from Other Agencies

TCEQ shares jurisdiction over APO facilities with many other state, federal, and local agencies, and some aspects of APOs are fully governed by other agencies. Concerns about noise and light nuisances may be addressed by your local municipality. Additional resources include:

Texas Mine Safety and Health Administration