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The background of the slide features a repeating honeycomb pattern. The cells of the honeycomb are filled with a blurred, multi-colored background that includes shades of blue, red, and orange, creating a bokeh effect. The pattern is most prominent in the top and bottom borders of the slide.

Environmental Permitting for Emerging Data Centers

INTRODUCTIONS



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Environmental Permitting and Compliance for Data Centers



Permitting/Compliance

- Air Permitting
- Due Diligence
- Wastewater
- Stormwater
- RCRA/Hazardous Waste
- SPCC



Consumption

- Energy
- Water



Air Permitting

EMISSION UNITS

- Emergency Generators
- Cooling Towers
- Fuel Storage Tanks

REGULATORY CONSIDERATIONS

- Attainment Status
- Permitting
- Modeling
- Commencing Construction

Due Diligence



Noise Modeling and Background Acoustics Surveys

Phase I ESA

- ASTM E1527-21 or E2247-16
- To evaluate business environmental risk.
- Identify soil or groundwater contamination



Wastewater



APPLICABILITY

PERMITTING

- Required prior to industrial wastewater discharge

REGULATORY CONSIDERATIONS

- Sampling
- Reporting
- Recordkeeping

Stormwater

CONSTRUCTION GENERAL PERMIT

Applicability

Regulatory Considerations

- Erosion controls
- Inspections

INDUSTRIAL GENERAL PERMIT

Applicability

Regulatory Considerations

- Plan maintenance
- Inspections
- Training

Resource Conservation and Recovery Act

HAZARDOUS WASTE

- Generator classification
- Waste streams

NON-HAZARDOUS WASTE



Spill Prevention Control and Countermeasures (SPCC) / Facility Response Plan (FRP)

APPLICABILITY

SPCC PLAN PURPOSE

- Prevention measures
- Control measures
- Countermeasure strategies

REGULATORY CONSIDERATIONS

- Plan maintenance
- Inspections
- Training



Water



Energy



Water Use

- Direct/Indirect
- Cooling
- Evaporative Cooling v. Air Cooling
- WUE v. PUE
- Local Considerations
- Relative Impact
- Future Considerations



Energy Considerations

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- Is data center load growth 2025 - 2030 "2X" or "10X"?
 - How will this load be served?
 - Who is going to pay for it?



Thank You & Questions

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