

DACUM Research Chart for Class A Wastewater Treatment Operator

DRAFT

DACUM Panel

Spencer Craig
Maintenance Technician
Sunset Mobile Home
Park/Whispering Hills Mobile Home
Park
Mt. Sterling, OH

Clifford Hill
Owner/Operator
Sunset Mobile Home
Park/Whispering Hills Mobile Home
Park
Mt. Sterling, OH

James Randall
Operator
Alton RV Park
Galloway, OH

Robin Reck
Owner/Operator
Three R Rolling Terrace Mobile
Home Park
Troy, OH

Alex Reck
Owner/Operator
A&R Reck Mobile Home Park
Bradford, OH

Robert Romeyn
Vice President
Maple Lakes Campground
Seville, OH

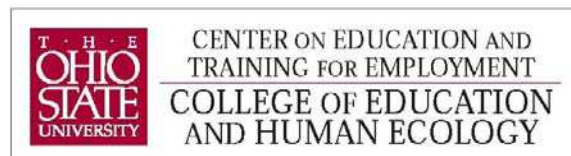
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**1900 Kenny Road
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August 6-7, 2009

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Duties		← Tasks →				
A	Maintain Wastewater Treatment Plant Components	A-1 Conduct quick assessment of plant	A-2 Conduct plant walk around	A-3 MTRI electrical control systems	A-4 MTRI pumps (e.g., submersible, grinder)	A-5 MTRI blowers
		B-1 Maintain test equipment	B-2 Perform settleability test	B-3 Perform water temperature testing	B-4 Perform water pH test	B-5 Perform dissolved oxygen test
B	Perform Wastewater Testing	B-13 Collect CBOD samples	B-14 Collect sludge samples			
		C-1 Record daily logs	C-2 Maintain completed log books	C-3 Prepare MORs	C-4 Maintain completed MORs	C-5 Maintain NPDES permit
C	Maintain Wastewater Treatment Plant Records					
D	Maintain Wastewater Treatment Facility	D-1 Conduct facility inspection	D-2 MTRI buildings & enclosures	D-3 Maintain yard & landscaping	D-4 Maintain roads, driveways & parking lots	D-5 MTRI HVAC systems
		E-1 Obtain operator employment contracts	E-2 Hire personnel (e.g., operators, laborers)	E-3 Maintain plant schedule (e.g., appointments, meetings)	E-4 Schedule plant personnel	E-5 Prepare operations budget
E	Perform Administrative Tasks	E-12 Maintain office files	E-13 Notify EPA & Health Department of compliance issues	E-14 Resolve customer & public issues	E-15 Prepare customer information bulletins	E-16 Maintain bulletin board/ information center
		F-1 Maintain Class A wastewater operator license	F-2 Review EPA updates (e.g., laws, regulations)	F-3 Participate in equipment training	F-4 Review professional journals & websites	F-5 Participate in professional organizations (e.g., ORWA, AWWA, OWEA)
F	Pursue Professional Development					

M = Maintain
 T = Troubleshoot
 R = Repair
 I = Install

A-6 MTRI electrical motors	A-7 MTRI back-up generators	A-8 MTRI tanks (e.g., aeration, clarifier, dosing)	A-9 MTRI sand filters	A-10 MTRI collection system	A-11 MTRI disinfectant system (e.g., UV, chlorine)	A-12 MTRI up flow clarifier fixed media	A-13 Maintain microorganism balance within tank
B-6 Perform chlorine test	B-7 Perform clarifier core sampling test	B-8 Perform alkalinity test	B-9 Collect total suspended solids samples	B-10 Collect phosphate samples	B-11 Collect fecal coliform samples	B-12 Collect ammonia samples	
C-6 Respond to EPA compliance issues	C-7 Analyze lab test results	C-8 Maintain record of correspondence with EPA & Health Department	C-9 Maintain equipment manuals				
D-6 MTRI security systems (e.g., fences, locks, lights)	D-7 Control pests	D-8 Maintain drainage infrastructure	D-9 Winterize facility				
E-6 Obtain bids/quotes (e.g., services, equipment)	E-7 Purchase supplies, equipment, & tools (e.g., office supplies, testing equipment)	E-8 Rent equipment (e.g., heavy equipment sewer equipment)	E-9 Invoice customers	E-10 Pay bills	E-11 Maintain parts & equipment inventory		
F-6 Consult with peers & experts							

General Knowledge and Skills

Basic plumbing	Plant operations
Basic mechanical	Heavy equipment
Basic electrical	Ohio EPA rules & regulations
Basic computer	Troubleshooting skills
Basic math	Prioritizing skills
Basic biology	Interpersonal skills
Basic book/recordkeeping	Decision making skills
Policies and procedures	Organizational skills
Treatment products	Marketing skills
Sample collection & testing	Blueprint reading
Aeration systems	
Communication skills (written, oral, listening)	

Worker Behaviors

Positive	Patient
Self-motivated	Respectful
Multitasker	Safety conscious
Problem solver	Resourceful
Detail oriented	Self reliant
Energetic	Creative
Alert	Able to accept criticism
Conscientious	Observant
Willing to learn	Optimistic
Stress tolerant	Tolerant
Polite	Common sense
Willing to get dirty	

Tools, Equipment, Supplies and Materials

Drain snakes	Flashlight
Hand shovel	Pipe cutters
Rake	Cell phone
Hoe	Lawnmower
Basic hand tools	Weed eater
Basic power tools	Sump pumps
Basic water testing equipment	Locks and keys
Boots	Air compressor
Water hose	Wheel barrow
Electrical testing equipment	Internet
Pipes/connectors/glue	Basic office supplies
Generator	Rope
Work lights	Buckets
Ladders	Portable storage tanks
Computer & related peripherals	Torches
Skid steer loader	Shop vac
Trucks (pickup, dump)	Portable heater
Backhoe	EPA website

Future Trends and Concerns

- Increasing regulation
- Changing technology
- Job security
- Health concerns
- Future job requirements
- Rising operating costs
- Lack of knowledge to do the job
- Change in surrounding community
- Change in environment (global warming)
- Regionalization
- Competition
- Safety issues
- Development of new products
- Budget cutbacks
- Financing for expansions and upgrades
- Compliance requirements

Acronyms

AWWA	American Waste Water Association
CBOD	Carbonaceous Biochemical Oxygen Demand
EPA	Environmental Protection Agency
HVAC	Heating, ventilation & Air Conditioning
MOR	Monthly Operating Report
NPDES	National Pollutant Discharge Elimination System
OWEA	Ohio Water Environment Association
ORWA	Ohio Rural Water Association
PPE	Personal Protective Equipment
UV	Ultraviolet