

Job Analysis Form

ALTERNATE FORMAT AVAILABLE



SHORT FORM FOR PRE-EMPLOYMENT PHYSICALS

PATIENT NAME: _____

JOB TITLE: Industrial Maintenance Mechanic (Master)

DEPARTMENT: Natural Resources, Wastewater

WORK SCHEDULE: 40/week

JOB DESCRIPTION: Performs advanced level mechanical responsibilities which include but are not limited to conducting complex maintenance, overhaul, and installation of heavy mechanical equipment and providing leadership and direction to mechanical and other skilled craft personnel. Will act as the liaison with wastewater operations staff, engineering, project managers and vendors regarding assigned mechanical work assignments.

WORK ENVIRONMENT: Wastewater Treatment Plant

ESSENTIAL FUNCTIONS: Provide direction and train staff in performing major repairs to heavy equipment such as but not limited to pumps, motors, gearboxes, hydraulic and pneumatic pump systems and equipment, compressors and large aeration blowers and gas scrubber, replace bearings as determined through vibration analysis or other established techniques. Replace pump volutes, shafts, impellers. Maintain and repair oxygen generation and distribution equipment. Salvage equipment for re-use. Evaluate, test and perform difficult troubleshooting of malfunctions in pumps, gearboxes, compressors, gravity belt thickeners, belt presses, disinfection equipment, chemical handling equipment, hydraulic systems, complex centrifuges and other related equipment in a large industrial environment. Apply and use state-of-the-art-technology to perform precision maintenance on equipment to extend life and reduce costs including but not limited to laser alignment vibration analysis, and root cause failure analysis techniques to equipment. Develop preventative and repair maintenance procedures. Using current operating and maintenance costs measurements and historical data from internal and external sources calculate dollar savings on an annualized basis for estimate of returns on precision maintenance. Lead and direct the work of assigned crew involved in the repair, overhaul, installation, and maintenance of equipment as determined by the supervisor including ensuring that industrial safety regulations, standards, and procedures are being followed. Provide direction and training to other staff in performing skilled machine shop assignments including milling, drilling and using a lathe, radial drill press, band saws, blueprints, engineering drawings, operations and maintenance manuals, vendor data and input based on prior experience. Provide leadership and training to mechanical staff in state-of-the-art welding including Metal InertGas (MIG), Tungsten Inert Gas (TIG) heli-arc, plasma cutter, oxyacetylene, carbon arc and stick welding. Fabricate parts for piping system, frames, fixtures, special tools, pump bases and repairs to machine housings, volutes, shafts and impellers. Fill in for the lead mechanic responsibilities including delegation of work based on individual skill levels. Determine priorities, work load and availability of staff, coordinate with operating section, off-site section and construction to plan and organize assigned duties. Develop, replace or modify existing systems to provide more reliable service and reduce maintenance costs and working with internal and external staff, vendors and consultants. Recommend and develop new ideas to improve wastewater treatment equipment, systems, and processes. Review and evaluate engineering work and make recommendations on design modifications and/or changes.

Exposures:

- Outside weather
- Non-weather related temp below 55°
- Non-weather related temp above 75°
- Humidity/dampness
- Moving mechanical parts
- Exposed high places
- Vibration
- Toxic or caustic chemicals
- Confined spaces
- Wet
- Gasses
- Fumes
- Odors
- Dusts
- Mists
- Radiation
- Explosives
- Noise Level 90 DBL
- Other _____

Special Requirements:

- CDL
- Respirator use

PHYSICAL DEMAND	HRS PER SHIFT
Standing	4 – 6 hours
Walking <input checked="" type="checkbox"/> uneven terrain	2 – 3 hours
Sitting	1 – 3 hours
Climbing stairs	15 min – 1 hour
Climbing <u>ladder</u>	15 min – 1 hour
Balancing	30 min – 4 hours
Bending/Stooping	2 – 6 hours
Kneeling	45 min – 1 hour
Crouching	15 min – 1 hour
Crawling	0 – 15 minutes
Foot controls	0 – 3 hours
Reaching above shoulders	5 min – 4 hours
Reaching waist-shoulder	3 – 6 hours

PHYSICAL DEMAND	HRS PER SHIFT
Reaching knee-waist	15 min – 2 hours
Reaching floor-knee	15 min – 2 hours
Lifting/Carrying 1-10#	2 – 6 hours
Lifting/Carrying 11-20#	1 – 4 hours
Lifting/Carrying 21-50#	30 min – 2 hours
Lifting/Carrying 51-100#	15 min – 1 hour
Lifting/Carrying 100+#	0 – 15 minutes
Handling	3 – 6 hours
Hand Controls	1 – 4 hours
Fingering <input checked="" type="checkbox"/> keyboarding	5 min -4 hours
Vision to assure safety of others	0 – 8 hours
Hearing to assure safety of others	0 – 8 hours
Other	

I have reviewed the following Job Analysis for the above-named employee.

Physician's Signature

Date