PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

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Subject: T3-2022-16220 Bull Run Filtration Projects

Construction Supplemental Information

The Portland Water Bureau is committed to a safe and healthy workspace throughout construction of the Bull Run Filtration Projects. This memo provides supplemental information about construction practices that the project contractors will implement during construction of the water filtration facility and pipelines.

Noise Management

The contractors have developed and will implement a Noise Pollution Control Plan during construction. The contractors will use a sound level meter to check for sound level verification. Among other noise control best practices, that plan requires that: no equipment will be used that has unmuffled exhausts and all equipment will comply with pertinent standards of the U.S. Environmental Protection Agency (EPA); stationary equipment will be located as far from nearby private properties as possible; practices pertaining to dump trucks will limit avoidable practices that generate excess noise such as compression brakes; and the contractor will construct temporary or portable acoustic barriers around stationary construction noise sources if required (for example, such barriers are planned near the raw water tunnel portal in the raw water pipelines easement and could be used around generators or other stationary equipment when located close to the property boundary).

Dust Management

The Applicant's Pre-Hearing Statement (Exhibit H.3), Attachment 8 (the "Dust Control Plans") explains the dust control plans for operation and construction of the filtration facility. The following dust control measures are planned for mitigation of dust generation and dispersal during the dry season:

- Construction vehicle speeds will be limited to 10 mph within the filtration facility will reduce dust on temporary paved or gravel road surfaces at the site.
- Water trucks will operate continuously through the dry season wetting all on site gravel roads.
- Water truck passes will be conducted in a manner that applies enough water to control dust but not to an excess that will cause runoff or erosion.
- Two on-site filling stations will be used for water trucks. Both filling locations will be temporarily paved or stabilized to provide adequate erosion prevention.

- Limited use of water absorbing (hygroscopic) or lignin products per manufacturers recommendation will decrease the frequency of watering trafficked areas.
- Wheel wash facilities will be installed and utilized as necessary to control track-out which could otherwise contribute to dust in the surrounding area.
- Use of cover or other acceptable means (e.g., watering as needed) to retain soils on stockpiles and prevent fugitive dust releases.
- While loading trucks from stockpile or excavation areas, when practical, conduct loading and unloading activities on the downwind side of the pile.
- Addition of moisture as needed during the loading operation to minimize the release of dust during loading and or hauling.
- While loading trucks from stockpile or excavation areas, minimize drop heights and transfer points whenever practical.

Regarding dust generation within pipeline construction zones, the contractors will also follow similar best-practices dust management procedures, which include:

- The contractor will use on-site water trucks to provide dust control. The on-site water trucks will keep the work area wetted down as necessary to prevent dust from leaving the work area.
- Temporary aggregate access roads will be used to reduce operation of equipment on bare ground.
- Paved roads at or near the construction zones will be regularly swept.
- While loading trucks from stockpile areas, where practical, conduct loading and unloading activities on the downwind side.
- While loading trucks from stockpile and excavation areas, minimize drop heights and transfer points.
- Wheel wash facilities will be installed and used as necessary to control track-out on roadways, such as where work is performed on the raw water tunnel and for the intertie.

Clean Air Construction Diesel Emission Requirements

The City of Portland participates in the Clean Air Construction (CAC) Program which aims to reduce sources of diesel emissions on construction projects by implementing a standard set of requirements.

Contractors working on the Bull Run Filtration Projects will need to certify that all applicable diesel equipment and vehicles are registered and in compliance with the CAC Program or have a valid exemption. Compliant equipment and vehicles will be issued a decal to keep displayed.

Contractors will need to take the following steps to reduce unnecessary diesel equipment idling, unless exempted:

- All nonroad diesel equipment must shut down after five minutes of inactivity, and

- all nonroad diesel equipment shall have decals/prompts visible to the operator to remind them to shut down the equipment after five minutes of inactivity, and
- contractors will post "Five Minute Limit" signs in high foot traffic areas of the job site, visible to workers, and
- contractors will ensure all diesel equipment operators are aware of the policy.

In addition, contractors will need to meet the CAC Program diesel engine requirements unless exempted and pursue engine retrofits or install emission control devices to reduce diesel particulate matter. Qualifying emission control devices must capture diesel particulate matter at a level of 85 percent or greater. These requirements apply to diesel-powered nonroad construction equipment greater than 25 horsepower and to all on-road diesel dump trucks and concrete mixers.

Safety Plans

Contractors will establish Site-Specific Health and Safety Plans for both the pipelines and the filtration facility sites. These plans establish general minimum safety requirements and procedures for the protection of personnel and to prevent and minimize personal injuries, illnesses, and physical damage to equipment, supplies, property, and the public.

Requirements include:

- Prior to the start of work, the contractor will designate in writing at least one competent person for each of the operations being completed to be on site at all times during construction activities. A competent person is an individual who, by way of training, experience, or combination thereof, is knowledgeable of applicable standards, is capable of identifying existing and predictable workplace hazards relating to the specific operation, is designated by the employer, and has authority to take appropriate actions, including stop task authority.
- Regular safety meetings will require participation by all persons working at the project site. Participants at these meetings shall discuss specific work activities for that shift, the Activity Hazard Analysis, the SafeStart card, results from safety inspections, required personal protective equipment, and all other necessary safety precautions.
- No firearms of any kind are permitted on the project. Only knives with less than a two-inch blade, suitable for construction will be permitted.
- All site visitors are required to attend a safety visitor orientation, have the approval of project management to enter the site, and must be escorted at all times.

Project Security

Contractors will establish site access requirements and install physical controls such as perimeter barriers or fencing and adequate lighting to secure the work site from unauthorized entry, theft, vandalism, or other security related events.

Substance Abuse Policy

The Water Bureau is committed to a drug-free, alcohol-free, safe and healthy work environment for all construction projects. Unlawful manufacture, distribution, dispensing, possession, or use of alcohol or controlled substances is prohibited at project sites. Our contractors have substance abuse prevention programs that include enforcement for prohibited substances. A program of substance abuse testing will monitor compliance with the policy.

Hazardous Materials Management

Only materials directly related to construction activities will be permitted on site. These materials will include but not be limited to diesel fuel, equipment lubricants, hydraulic fluids, paint, and other materials specified for incorporation into the filtration facility construction. Use, transport, and storage of all such materials will be in full accordance with applicable regulations. Any material classified with a hazardous rating will be stored and used in full compliance with its respective Safety Data Sheet as required by Occupation Safety and Health Administration.

Fuels, for example, will be stored in a covered, polyethylene-lined containment basin. Next to the basin will be shallow, reinforced concrete depressed slabs to allow for transfer of fuel to and from the fuel tanks. The lube truck will park on this slab overnight to establish further containment during off-hours. During the day, the lube truck will fuel and service construction equipment. Other materials such as oils, grease drums, and waste oil will be stored in container vans and have pans for secondary containment.

After the filtration facility is built, but prior to coming fully online, there will be a startup phase for the treatment process when the treatment chemicals that will be part of operation will be onsite. These chemicals will be managed with the same procedures for safe handling and storage as during the operations phase.

Fire Protection

The project site will have a temporary fire protection system designed to provide required fire flow during construction. This includes a fire hydrant within 250 feet of the fuel storage. The site access road is also designed to accommodate a 75,000 lb. engine, as required by fire code.

Emergency Vehicle Access

The contractor will develop a Traffic Control Plan (TCP) prior to performing work within the public roads. The TCP is developed in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways, issued by the Federal Highway Administration, U.S. Department of Transportation (the “MUTCD”), which is the industry standard for construction projects throughout the United States. MUTCD Part 6 on Temporary Traffic Control provides 184 pages of specific standards for the needs and control of all road users (motorists, bicyclists, and pedestrians) through a temporary zone where the normal function of the roadway is suspended. In compliance with the MUTCD, the TCP plan describes in detail how construction

activities will maintain access for all traffic, including but not limited to emergency responders, pedestrians, vehicles, and commercial activity.

Additionally, the Water Bureau has developed Construction Specifications 01 55 26 - Temporary Traffic Control and 01 55 26.13 - Accommodations for Public Traffic which specify that all traffic control methods used by contractors on the project must comply with industry standards from Multnomah County, Oregon Department of Transportation, and the MUTCD. The requirements listed in the contract specifications dictate that the contractors shall provide for the safety and convenience of the public when performing work within the roadway. Specific language pertaining to emergency access is as follows:

- They shall allow emergency vehicles, incident response units, and transit vehicles immediate passage at all times, maintain 24-hour access to all businesses and residences adjacent to the areas of work for the project and along haul routes, do not block driveways or sidewalks, and maintain safe pedestrian accesses.

Additionally, the contract specifications require that all contractors shall provide notice to businesses and residents of upcoming construction at least 14 days, but no more than 28 days, before construction is expected to begin in front of their property. They are also required to provide notice to public agencies impacted by any proposed roadwork, including, but not limited to, the Local Fire Protection Agency, Multnomah County Sheriff, Gresham Police Department, and Portland Water Bureau Emergency Dispatch.

When temporary lane or roadway closures are needed to safely complete construction activities, the Water Bureau will communicate with emergency responders and provide information about anticipated traffic impacts in the area. The Water Bureau will provide emergency responders weekly updates to planned road impacts with details about hours and days of the week when work will be occurring. Emergency responders will also be provided with the contact information for the site foreman to allow direct communication between the parties. For example, emergency responders call ahead to a construction temporary road closure to ensure that emergency vehicles can proceed efficiently through the work zone. This coordination allows the construction workers to adjust their work accordingly, such as by placing steel plates in order to allow the emergency vehicles to pass immediately upon arrival. Adjustments to TCPs will be made throughout construction as needed to improve response time if the construction team receives comments from emergency responders.