



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Board Report

Safety, Security, and Protection

- **Safety, Security, and Protection Monthly Activities for May 2024**

Summary

This monthly report for the Safety, Security, and Protection Group provides a summary of activities for May 2024 in the following key areas:

- Security and Emergency Management
 - Security and Emergency Response
 - Emergency Management Program Update
- Safety, Regulatory, and Training (SRT)
 - Health & Safety Programs
 - Environmental Programs
 - Apprenticeship Programs
 - Safety and Technical Training Programs

Purpose

Informational

Attachments

Attachment 1: Detailed Report – Safety, Security, and Protection Monthly Activities for May 2024

Office of Safety, Security & Protection

Key Activities Report for May 2024

Project Highlights

Security and Emergency Management

Security and Emergency Response

Strengthening Protective Partnerships with the FBI

We were honored to host a distinguished group from the Federal Bureau of Investigation (FBI) at the Weymouth Water Treatment Plant. The visit, which included special agents and analysts, marked a significant milestone in our ongoing efforts to safeguard Metropolitan critical infrastructure in Southern California.

During their visit, the FBI team delved into the intricacies of our facilities, gaining firsthand insights into the vital role they play in ensuring the wellbeing of over 19 million people in our service area. As we shared our challenges and concerns, they offered valuable support and established streamlined channels for emergency communication, concerns, and intelligence sharing.

This meeting signifies the beginning of a collaborative journey towards enhanced information sharing related to water sector-specific critical infrastructure. We are excited to embark on this path, which will involve deepening our engagement in open-source intelligence (OSINT) and participating in joint exercises to explore various security scenarios and mitigation strategies.

By fostering stronger partnerships with agencies like the FBI, we are not only bolstering our defenses but also laying the groundwork for a more resilient and secure future for our communities.



FBI visit represents significant milestone in effort to safeguard Metropolitan drinking water infrastructure

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Security and Emergency Response

Water Information Sharing & Analysis Center (WaterISAC) is a nonprofit organization that is the security information sharing and operational arm of the U.S. water and wastewater sector. WaterISAC helps members strengthen their physical and cyber security, recover from natural and man-made disasters, and improve overall preparedness and resilience. It provides Metropolitan Security Management Unit with twice-weekly e-newsletters, alerts, webinars, and a library of physical and cyber threat information. WaterISAC also provides guidance on risk management, mitigation, and resilience. Members include hundreds of utilities serving more than 200 million people in the U.S., as well as state, local, and federal agencies and consulting firms.

On Thursday, May 23, Metropolitan Security Management partnered with Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA) Region 9 management to present a joint panel discussion during WaterISAC's Spring 2024 H2OSecCon. The presentation focused on leveraging DHS CISA partnerships, training, assessments, assistance, products, and services to drive water sector security upgrades. The H2OSecCon featured panel discussions and presentations from water utility and security experts sharing their experiences and recommendations on physical security.



Metropolitan Security and DHS CISA present joint panel discussion during WaterISAC's Spring 2024 H2OSecCon

Emergency Management Program Update

Dam Emergency Action Plan (EAP) training continued this month, with exercises held at the Weymouth Plant and Diamond Valley Lake. Metropolitan received an award from the United States Society on Dams (USSD), during their recent conference, for outstanding work in development of our Dam Emergency Action Plans.

Outreach to outside agencies continued as Metropolitan prepares for possible future emergencies. This month, staff:

- Completed State Hazardous Materials Incident Command training at the Riverside City Emergency Operations Center (EOC)
- Added an additional monthly member agencies radio test
- Supported the Department of Water Resources by hosting one of their Dam EAP tabletop exercises at the Jensen Plant

Staff are also planning to support the California Utilities Emergency Association (CUEA) by making an emergency manager available periodically to work with CUEA staff in the State Operations Center (SOC) during emergency activations.

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Project Highlights

Safety, Regulatory, and Training

SRT Health & Safety Programs

National Safety Council (NSC) Initiative


SRT finalized the charter and composition of Metropolitan's Executive Safety Committee. This committee will make appropriate executive-level decisions on safety priorities, resource allocation and initiatives, and will demonstrate executive leadership support and reinforce the importance of chain of command when finding safety solutions. The inaugural Executive Safety Committee meeting is scheduled for July 29, 2024. An executive leadership training, as well as subsequent meetings, have been scheduled for the remainder of the year.

Safety Communication

A new Safety Talk was issued to address safe work practices for the use of sodium thiosulfate and sodium bisulfate during dewatering. HSE 112 Electrical Safety Program updated to improve safe work practices, training requirements, along with other program guidance.

MWD Safety Talk



Employee Environmental, Health & Safety Information for Dewatering and Nitrification

Sodium Thiosulfate Not Hazardous No Odor No Color	 Dewatering	Sodium Bisulfate Corrosive and Irritant Slight rotten egg odor White color
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Nitrification is one of the various challenges Metropolitan may encounter during a shutdown. When employees are tasked with dewatering, following these work practices can keep employees safe.

SAFE WORK PRACTICES

- Hold pre-job safety meetings to coordinate the day's or night's activities and determine the best location for placement of the dechlor chemical. Take this time to consider potentially hazardous tasks and their mitigation efforts.
- Review and understand the safety data sheets associated with dewatering chemicals (e.g., Sodium Thiosulfate or Sodium Bisulfite).
- Wear PPE in accordance with HSE 115. PPE requirements will differ based on the type of work activities taking place. For example, making direct connections and transferring chemical will require higher levels of PPE.
- Be prepared for potential spills or leaks. Consider how much chemical may be used during dewatering. Mobile spill kits should be readily available in the appropriate sizes (e.g., small to large totes).
- Consider methods of secondary containment for quick deployment of chemicals to work sites.



FURTHER CONSIDERATIONS

- **Needle valves work better when dosing water with Sodium Bisulfite** because they allow fine adjustments to dial in the chemical dose.
 - Ball valves are not designed to make fine adjustments to chemical dosing.
- **During dewatering operations, continuous monitoring and periodic testing is important to ensure dosing remains appropriate.**
 - Water conditions change throughout the day, so adjustments may have to be made periodically.
- **When bags of Sodium Thiosulfate are used for dewatering, staff should periodically check on the bag's condition.** Bags may appear to look full, but they are actually empty or near empty.

New Safety Talk

HSE 112

Electrical Safety Program MWD Health, Safety, and Environmental Manual
Revision April 2024

1.0 PURPOSE AND SCOPE

The Electrical Safety Program establishes safety requirements for working on or near high and low voltage lines, circuits, equipment, and raceways. It is Metropolitan's policy that all electrical circuits, cables, wires, or equipment will be considered energized until proven de-energized by approved test instruments by a Qualified Electrical Worker.

Employees shall also refer to the [Systems Operating Orders Manual \(SOOM\)](#) for detailed instructions on clearances, outages, and electrical work on equipment rated at or above 600 volts. For other Lockout/Blockout or grounding procedures for equipment rated below 600 volts, refer to [HSE 114 Lockout/Blockout \(LOBO\) Program](#) and the [SOOM](#).

This program is governed by the requirements of Cal/OSHA Title 8, California Code of Regulations, Electrical Safety Orders 2320.1-2320.9, 2940-2945, and the Telecommunication Safety Orders 8600-8618.

2.0 APPLICABILITY

This program applies to all Metropolitan employees and contract workers under the supervision of Metropolitan whose job tasks involve working on electrical lines, equipment and/or systems.

3.0 DEFINITIONS

Qualified Electrical Worker (QEW) – A qualified electrical worker (i.e., an electrician) is one who has a minimum of two years of training and experience with energized high or low voltage circuits and equipment. A qualified electrical worker must demonstrate proficiency and familiarity with the work to be performed and knowledge of the hazards involved (CCR Title 8, Section 2700). See [Section 7](#) for training, skills, and knowledge required for a QEW.

Qualified Person – An authorized person (employee or contractor) who by experience or instruction is familiar with the construction and operation to be performed and the hazard involved when working on de-energized high and/or low voltage circuits and equipment. See [Section 7](#) for training, skills, and knowledge required for a qualified person.

Arc Flash Hazard – A dangerous condition associated with the possible release of energy caused by an electric arc. Refer to [Appendix A](#) for appropriate level of PPE for arc flash hazard when performing energized work.

An arc flash hazard may exist when energized electrical conductors or circuit parts are exposed or when they are within equipment in a guarded or enclosed condition, specifically when a person is interacting with the equipment in such a manner that could cause an electrical arc.

Arc Rating (AR) – The value attributed to materials that describes their performance to exposure to an electrical arc discharge. The arc rating is expressed in cal/cm² and is derived from the determined value of the arc thermal performance value (ATPV).

HSE 112 Electrical Safety

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SRT Environmental Programs

Abandoned Waste

SRT Environmental responded for a clean-up of abandoned waste found on Metropolitan property in Jurupa Valley. The waste consisted of concrete pipe and insulation batting material. Several of these incidents occur each year, typically in remote areas.



Before clean-up



After clean-up

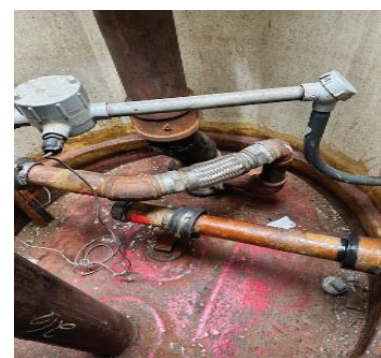


Weymouth Underground Storage Tank (UST) Return to Service

The required vapor vent line modifications to the Weymouth Fuel UST and testing were completed. This work enabled a full return-to-service for both tank compartments. Staff also coordinated the site visits by the City of La Verne Fire Marshal for the final inspections.



Vapor vent line removal above grade and capped



Vent line capped below grade

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Advanced Clean Fleets Regulatory Implementation

In accordance with Metropolitan's "try before you buy" approach in implementing the CARB Advanced Clean Fleet regulation, an all-electric dump truck demonstration was conducted at the Mills facility. Feedback was positive for handling onsite activities. The truck generated less sound and greater torque than traditional dump trucks, but greater range would be required for remote or off-site work. Staff will continue to arrange additional opportunities to test available zero emission vehicles.



Battle Motors electric dump truck to transport sludge at Mills Plant

SRT Apprenticeship Programs

The SRT Apprenticeship Programs are designed to train apprentices to become qualified mechanics and electricians who are responsible for maintaining Metropolitan's water treatment and distribution systems. Recently, the Class of 2027 mechanical apprentices completed their final exams. During their training, they learned to read schematics, blueprints, and drawings. The final exams evaluated their ability to recognize symbols, read prints, and use them to fabricate projects. The Class of 2027 electricians were taught about DC circuits and were challenged to troubleshoot and solve DC circuit problems during their session. Final exams for the Class of 2027 electricians are scheduled for early June.

Lastly, the Class of 2026 electricians and desert electrical cross-training participants also completed their final exams this month. They were tested on troubleshooting circuits and motor control devices. The final exam consisted of written and practical components, allowing instructors to assess each student's competency and ability to troubleshoot problems.



Mechanical apprentices reviewing hydraulic systems



Electrical apprentices learning to calculate current, voltage, resistance, and power

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SRT Safety and Technical Training Programs

This month, SRT Safety and Technical Training staff conducted Hydroelectric On-site Operator (OSO) training over two weeks and approximately 48 hours of classroom and field instruction. OSO training educates employees who work at hydroelectric power plants (HEP) and/or respond to alarms at an HEP on the plant operating procedures for startup, shutdown, and alarm response. Training staff was joined by subject matter experts to deliver instruction and facilitate field visits to San Dimas HEP and Pressure Control Structure (PCS), Etiwanda HEP, Lake Mathews HEP, Temescal HEP, Eagle Rock Control Center, Rio Hondo HEP and PCS, and Coyote Creek HEP and PCS.



OSO training exercise to jack the unit at Lake Mathews HEP during pre-start procedures (left) and to perform a weekly inspection procedure at Temescal HEP (right)