FINAL INDEPENDENT EVALUATOR ANNUAL REPORT

JUNE 30, 2023

TBC
Trans Bay Cable

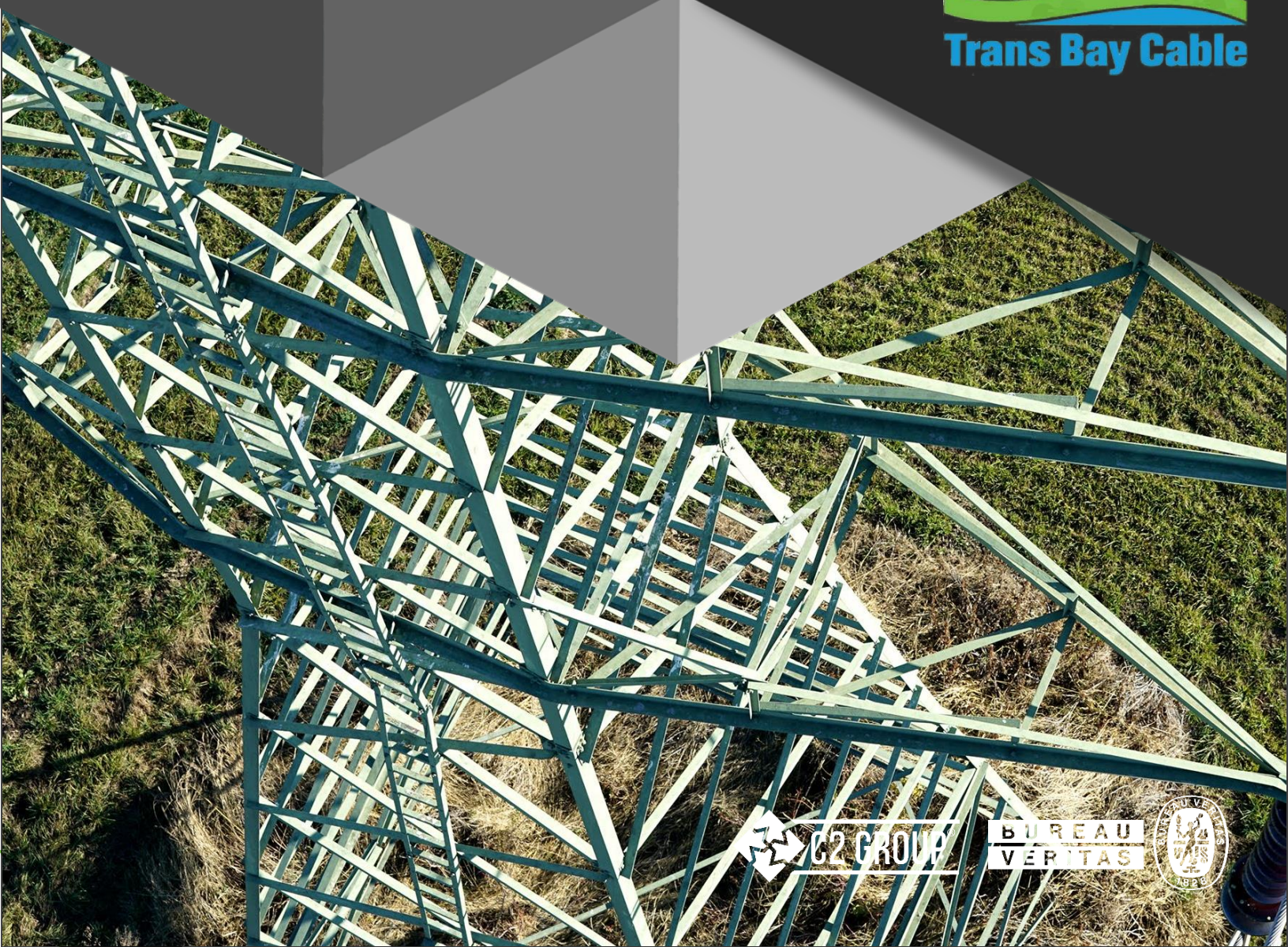


Table of Contents

Disclaimer

This report has been compiled through the process of observation and the review of provided documents. The report is intended to serve only as a guide to assist with achieving compliance with regulatory requirements instituted by the Office of Energy Infrastructure Safety (OEIS) for an independent evaluation of electric utility providers' Wildfire Mitigation Practices. Bureau Veritas North America, Inc. (BVNA) is not the designer, implementer, or owner of the Wildfire Mitigation Plan (WMP). It is not responsible for its content, implementation, and/or any liabilities, obligations, or responsibilities arising therein.

The report reflects only those conditions and practices which could be ascertained through observation at the time of evaluation. This report is limited to those items specifically identified herein or as may be further required by CPUC at the time of the evaluation. The report is not intended to represent the dangers, hazards, and/or exposures do not exist. BVNA shall only be responsible for the performance of the services identified or defined in our specific scope of services.

BVNA does not assume any responsibility for inaccurate, erroneous, or false information, expressed or implied, given to BVNA as the Independent Evaluator (IE). In addition, BVNA shall have no responsibility to any third party or for any other matters not directly caused by BVNA or beyond the reasonable control of BVNA. BVNA's liability is limited to the cost of the services expressed herein or as otherwise agreed to by BVNA by a separate written contract.

1. EXECUTIVE SUMMARY

Background

Derived from the devastating wildfires of 2016 and 2017, California Public Utilities Commission (CPUC) opened Rulemaking 18-10-0071 to provide guidance on the Investor-Owned Utilities' (IOU), Wildfire Mitigation Plans (WMP's). Moving forward, California Legislature passed several bills increasing the oversight for the investor-owned utilities (IOU's) as it related to mitigating wildfires associated with electrical corporation's infrastructure role in utility-related wildfires. This resulted in key legislative measures, Senate Bill 901 (2018), Assembly Bill 1054 (2019) and Assembly Bill 111 (2019), which led to the establishment of the Wildfire Safety Advisory Board (WSAB). Since the passing and ratification of this legislation, the Wildfire Safety Division (WSD) of the California Public Utilities Commission (CPUC) has transitioned to the Office of Energy Infrastructure Safety (OEIS). The wildfire mitigation process requires utilities to submit their annual Wildfire Mitigation Plan (WMP) in a 3-year cycle; the initial WMP is submitted in the first year (2020) and follows with annual updates occurring for years 2 (2021) and 3 (2022).

Pursuant to P.U. Code Section 8386.3(c)(2)(A), Bureau Veritas North America, Inc. (BVNA) has been selected as an IE to review and assess Trans Bay Cable's (TBC) 2022 Wildfire Mitigation Plan (WMP) and provide a report on July 1 of each year. BVNA has evaluated TBC's compliance with its 2022 WMP pursuant to Public Utilities Code Section 8386, validated TBC's quality assurance and quality control (QA/QC) programs outlined for support of WMP initiatives and reviewed its WMP funding activities.

Scope

Pursuant to the requirements of the Public Utilities Code (PU Code); BVNA, in partnership with C2 Group, has reviewed TBC's 2022 WMP issued and OEIS approved on August 30, 2022, known as the "Wildfire Mitigation Plan 2022", Rulemaking 18-10-007, for initiative compliance verification for the execution of the WMP goals and targets. In addition, supplemental documents (see Appendix A) were also reviewed for verification of compliance, validation of quality assurance QA/QC programs, and assessment of the utility funding activities related to WMP.

Trans Bay Cable

As described within TBC's Annual Report on Compliance (ARC) dated March 2023, TBC is a transmission-only utility with no retail/end-use customers. The TBC western converter station is located in an urban settings within the City and County of San Francisco while the eastern converter station is located in a residential and industrial area of [redacted], CA within 3-miles of a Tier 2 High Fire Threat District ("HFTD).

Key Findings

As described in further detail within Section 3, the IE compliance review has found that the 2022 WMP and data found in supplemental documents (see Appendix A), along with confirmation by an IE [redacted], CA converter station site visit, TBC is substantially in compliance with the 2022 WMP:

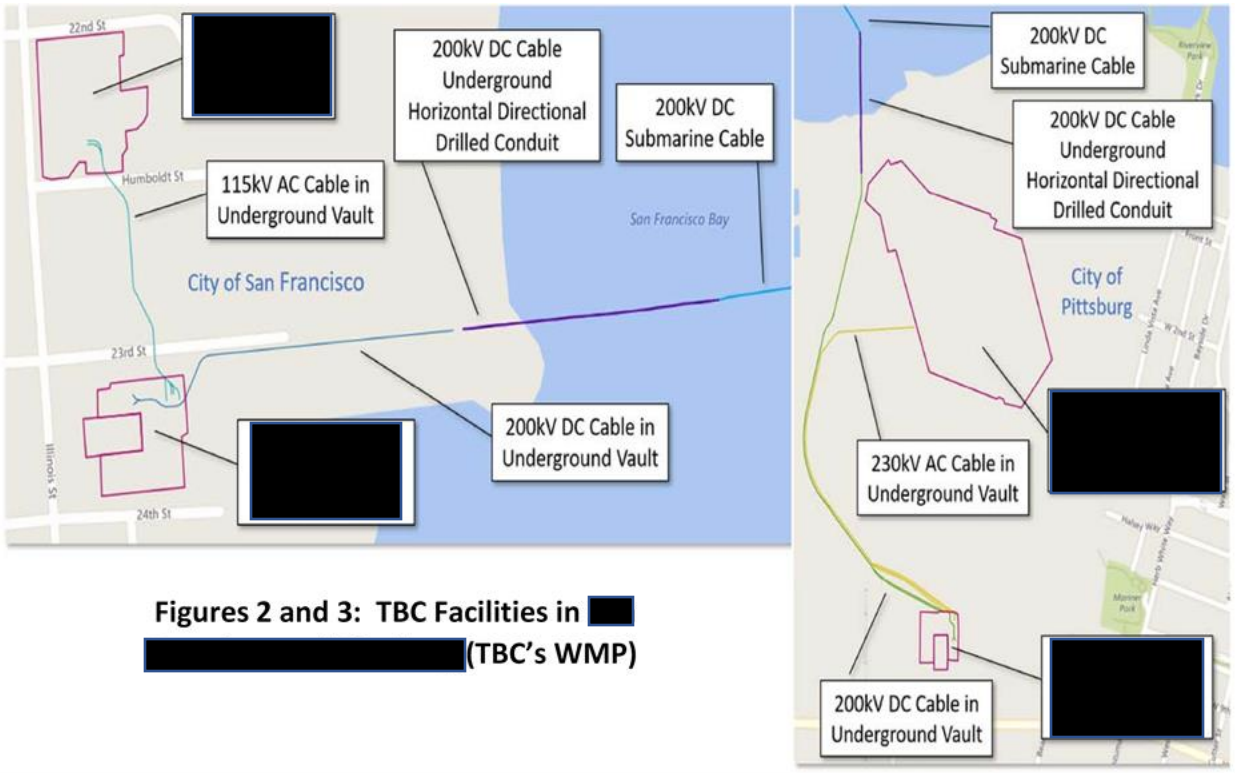
1. 2022 WMP activities are substantially completed pending final inspections.
2. 2022 WMP activities were originally funded as 2020 WMP initiatives and implemented in 2022 due to vendor availability and supply chain issues.

2. INTRODUCTION

A site visit to the [redacted] and the review of all documents supporting the implementation of the 2022 WMP strategic initiatives for the mostly urban facility has been conducted. As a result, BVNA has provided the following IE evaluation report (Report) describing the technical review and findings. As described within the TBC's Annual Report on Compliance for 2022 dated March 2023 (ARC), Trans Bay Cable, (TBC) is a subsidiary of NextEra Energy Transmission, LLC. [redacted] at [redacted]. [redacted] Alternating Current (AC) transmission cables. All above-ground transmission infrastructure is fully contained within the walls of the systems converter station (Figure 1).

Figure 1-Overview of Trans Bay Cable Facilities and Service Territory (TBC's WMP)

TBC has been in service since November 2010 and is a transmission-only utility with no retail customers, no distribution customers, and no distribution system. The [redacted] is surrounded entirely by an urban environment and has no potential to cause a wildfire ignition. The [redacted] substation is also in an urban setting. It is approximately 3-miles directly North of an area designated as Tier 2 (Elevated) High Fire-Threat District (HFTD) per the California Public Utility Commission's (CPUC) published fire threat maps. The TBC transmission facility can transport up to 400-Megawatts between the two [redacted] and surrounded by PG&E service territory. Other than the equipment within the substation boundaries, TBC has no overhead lines or equipment and is substantially hardened against wildfires (Figures 2 and 3).



Figures 2 and 3: TBC Facilities in [redacted] (TBC's WMP)

3. INDEPENDENT EVALUATOR REVIEW OF COMPLIANCE

At the commencement of the evaluation, the IE initiated the assessment through a review of TBC's 2022 WMP along with all publicly available documents as listed in Appendix A to identify TBC's stated 2022 WMP goals. The IE reviewed the 2022 WMP activities as described in the WMP, along with other publicly available records. In addition, the IE submitted data requests and conducted a site visit to verify the WMP activities (See Appendix C for Data Requests Submitted and Responses) at the [redacted] at [redacted], [redacted], CA. The site visit collected images and obtained information from the onsite SMEs to validate compliance with the 2022 WMP activities and initiatives. Each section's analysis and key findings are detailed further within Section 3, the Independent Evaluator Review of Compliance section.

3.1 WMP Activity Completion

WMP activities outlined in TBC's 2022 WMP are limited due to the scale and scope of TBC's [redacted] operations and the inherent hardening of TBC's transmission infrastructure to wildfire risks. The limited risk is demonstrated by TBC's underground or submerged infrastructure and having no transmission or distribution infrastructure exposed to wildlands. TBC does not maintain a program specifically geared towards wildfire mitigation. As a result, TBC did not identify specific wildfire mitigation initiatives in its 2022 WMP.

TBC has committed to constructing, maintaining, and operating its transmission facilities to minimize the risk of catastrophic wildfire posed by the facility. To meet the requirements of SB 901 and PU Code §8386, TBC has developed objectives that are directly related to maximizing fire prevention efforts such as containing fire to the facility and implementing fire extinguishing strategies to minimize the potential of spread of fire due to facility fault extending to its surrounding environment. In addition, TBC has improved situational awareness and has employed methods for rapid communication at the start of a fire by providing facility monitoring and surveillance. The WMP sets forth the methodology for and assessment of the risk of wildfire ignition; leverages preventative strategies and protocols currently in place for fire prevention, directives for operational response in the event of a wildfire or wildfire conditions, and system restoration.

Section 7.3 of the 2022 TBC WMP details the specific wildfire mitigation program activities illustrated as subcategories:

1. Risk assessment and mapping
2. Situational awareness and forecasting
3. Grid design and system hardening
4. Asset management and inspections
5. Vegetation management and inspections

6. Grid operations and protocols
7. Data governance
8. Resource allocation methodology
9. Emergency planning and preparedness
10. Stakeholder cooperation and community engagement

Due to the limited scope and scale of TBC's operation at the [redacted] site, TBC combines its efforts of managing the risk of wildfire with those efforts to ensure a safe and reliable operation of their facility. With this information, listed below in Table 1 are four (4) of ten (10) listed categories as identified in the WMP section 7.3 where TBC has provided a narrative of explanation of the efforts:

Table 1-WMP Activities to Be Reviewed

2022 WMP Section	WMP Category
7.3 (1)	Risk Assessment and Mapping
7.3 (2)	Situational Awareness and Forecasting
7.3 (3)	Grid Design and Hardening
7.3 (6)	Grid Operations and Protocols

The performance of the above activities is assessed in the following sections of this report. Completion of these activities and adherence to applicable protocols and procedures are summarized in Section 4 Conclusion.

3.1.1 Sampling Methodology and Discussion

Sampling percentages do not apply for this facility as the IE observed it in its entirety. Information regarding the site and the WMP activities were captured during the onsite field visit of TBC's [redacted] Facility on May 18th, 2023, which included a question and answer session with TBC personnel. Pictures of all pre-identified items were captured, and a summary of the site findings is provided within this report.

TBC [redacted] [redacted]- IE Field Visit on May 18, 2023 from 10:00am-12:00pm

Field Visit Attendees:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Facility Audit, Inside Concrete Perimeter Wall

Figure 2: Street view of the TBC [redacted]

Upon arrival at the [redacted] Facility, it was observed that the facility is a secured facility surrounded by a 12 ft. high solid concrete wall with access provided by a two gate system, an entrance wrought iron vehicle gate with intercom/keypad, followed by a solid metal vehicle gate located at the southeast corner of the concrete perimeter wall and an exit gate located at the southwest corner of the facility. Outside the perimeter walls, the front of the facility is fully landscaped, including ivy on the front side of the South perimeter wall. All ground surfaces within the concrete perimeter walls are either hardscape (concrete or asphalt) or covered with gravel, with no landscaping throughout the facility interior.

The IE staff were greeted by the above-noted TBC staff and proceeded to their meeting room to discuss the objectives of the site visit and to further discuss the completion of prescribed initiatives found in the TBC 2022 WMP. After our short meeting, we proceeded to tour the facility (Figures 5) clockwise along the paved access road.

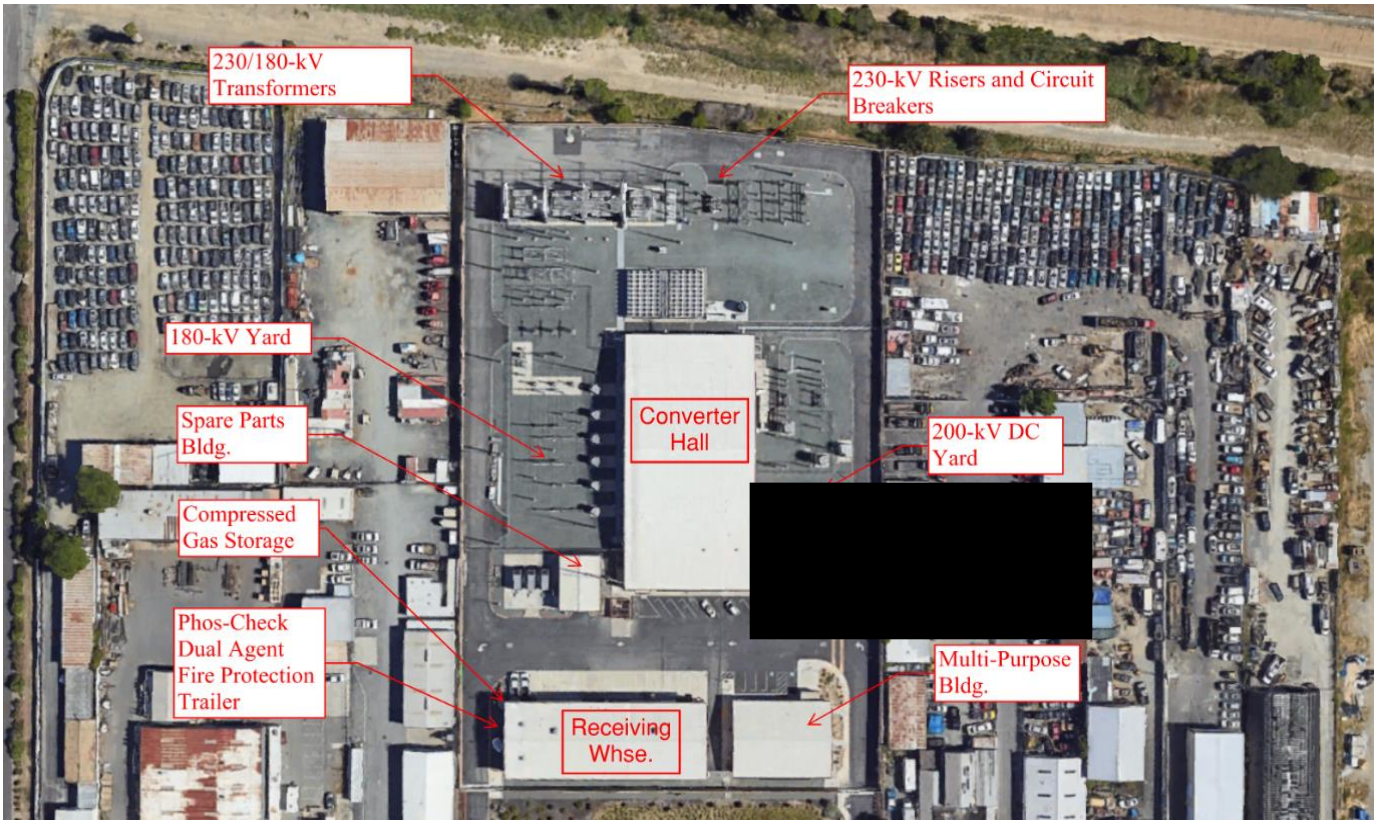


Figure 3: Overview of TBC [redacted] Facility

Outside Facility Perimeter

Surrounding the exterior of the [redacted] facility immediately east and west are auto salvage yards. North of the substation, there appears to be a vegetation swale for drainage, with vegetation up to the concrete perimeter wall of the facility. Further north is a decommissioned industrial power plant that extends to the bay. The south wall of the facility, which fronts the public roadway, has vegetation climbing on the perimeter wall with a four (4) foot wide gravel separation with placed landscaping plants between the wall and the maintained lawn area.

For perimeter security and observance of areas outside the perimeter wall, TBC has installed visual, ultraviolet, and infrared cameras that view both inside and outside their facilities (Figure 7). All cameras are monitored by the facilities Control Center, which is staffed 24/7/365.

Figure 6: Surrounding Properties

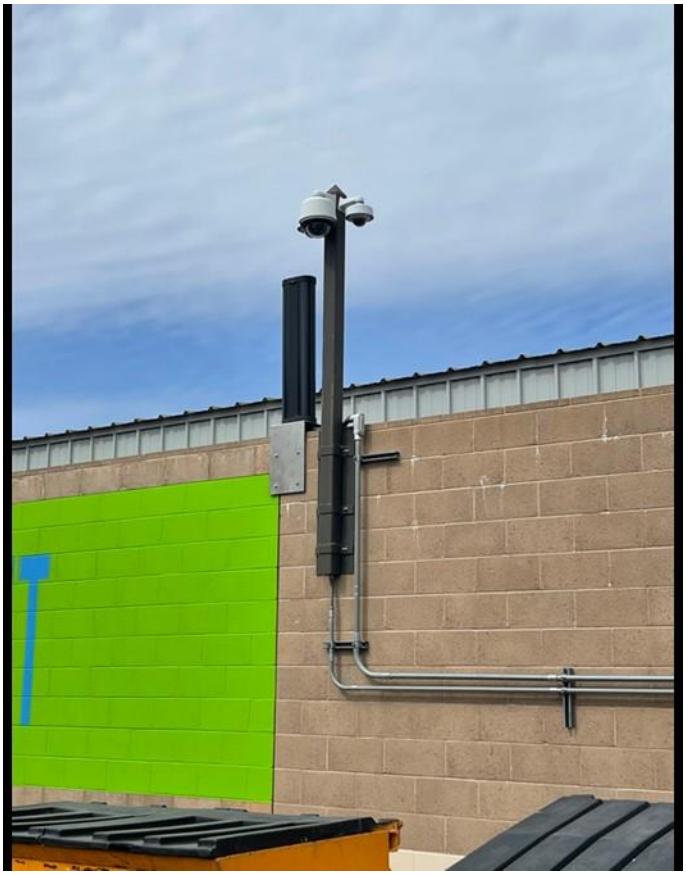


Figure 7: Visual, Ultraviolet and IR Camera

3.1.2 Large Volume Quantifiable Goal/Target – Field Verifiable

Large Volume Quantifiable Goal/Target - Field Verifiable initiative(s) or commitment(s) is not included in the assessment of TBC's [redacted] facility since these activities are not present in the 2022 WMP list due to the facility's limited operational scope and nature. Therefore, this subject is not applicable or covered in this report.

3.1.3 Large Volume Quantifiable Goal/Target – Not Field Verifiable

Large Volume Quantifiable Goal/Target - Not Field Verifiable initiative(s) or commitment(s) is not included in the assessment of TBC's [redacted] facility since these activities are not present in the 2022 WMP list due to the facility's limited operational scope and nature. Therefore, this subject is not applicable or covered in this report.

3.1.4 Small (less than 100 times) Volume Quantifiable Goal/Target

Small Volume Quantifiable Goal/Target initiative(s) or commitment(s) is not included in the assessment of TBC's [redacted] facility since these activities are not present in the 2022 WMP list due to the facility's limited operational scope and nature. Therefore, this subject is not applicable or covered in this report.

3.1.5 Qualitative Goal/Target

Qualitative Goal/Target initiative(s) or commitment(s) is not included in the assessment of TBC's [redacted] facility since these activities are not present in the 2021 WMP list due to the facility's limited operational scope and nature. Therefore, this subject is not applicable or covered in this report.

3.1.5.1 Review of Initiatives

The following review of initiatives is demonstrated below as listed in TBC's 2022 WMP and shown in Table 1 – WMP Activities to be Reviewed.

7.3.1 Risk Assessment and Mapping:

TBC engaged in a third-party wildfire assessment in Q4 of 2020 that identified key wildfire-related risks for its [redacted] Converter Station and is documented in their 2020 WMP. TBC conducted a second level review of the 2020 assessment in Q1 of 2022 utilizing the annually updated Failure Modes and Effects Analysis (FMEA) methodology in order to evaluate potential fire protection enhancements for the [redacted] Converter Station.

TBC's 2020 risk assessment identified that the storage of compressed gas cylinders in the spare parts building created a risk to the facility since the building was not equipped with a fire protection system. As part of its 2022 WMP activities, TBC secured a horizontal metal compressed gas storage cage (figure 9) and relocated the compressed gas cylinders to the newly covered exterior fire protection foam trailer storage structure on the exterior of the Receiving Warehouse building (west end of building).

Figure 8: Receiving Warehouse Exterior Storage

Figure 9: Compressed Gas Storage Cage

This initiative has been reviewed and considered "Validated."

7.3.2 Situational Awareness and Forecasting:

TBC has successfully completed prior year initiatives to increase the level of situational awareness and forecasting by installing a transformer monitoring system and a fiber-optic based cable monitoring system at the facility.

The transformer monitoring of the real-time health for electric transformers containing mineral oil provides early identification of transformer degradation of the mineral oil dielectric properties, leading to internal electrical arcing. A transformer oil control system was subsequently installed in 2021 for improved preventative maintenance of the main transformers. The completion of the transformer monitoring system was visually verified during the 2022 IE site visit.

The fiber-optic cable monitoring system was installed in 2020 to allow TBC to monitor underground cables for physical vibration, temperature and abnormal electrical discharge at cable terminations.

The 2022 TBC WMP expresses the importance of the on-site TBC System Operators for situational awareness at the [redacted] substation. Through data request responses and staff interviews, TBC provided System Operator one-time training and qualification records and described the redundancy programs for the availability of TBC qualified

System Operators in the event of an absence at the [redacted] Substation. TBC provided System Operator Emergency Action Plan training rosters dated May 12, 2022 along with the TBC H&S Emergency Action Plan curriculum in response to Data Requests DR001, Request Items 1 and 2.

This initiative has been reviewed and considered "Validated."

7.3.3 Grid Design and System Hardening:

The TBC 2022 WMP did not set goals or initiatives for Grid Design and System Hardening as the facility completed seismic improvements to their facility in 2021 by installing base vibration isolators at the foundation of each of the main transformers to significantly reduce the risk of transformer derangement during seismic events. The seismic improvements were visually confirmed by the IE during the 2022 site visit for the evaluation of the TBC 2021 WMP.

TBC does not utilize overhead lines and all TBC air insulated conductors and bus-work are fully contained within the converter station exterior walls. The converter station is equipped with approved fire access roadways with private fire hydrants and Knox Boxes for emergency responder access and firefighting capabilities.

Through data requests, TBC provides regular maintenance of the private site fire hydrants as indicated in the response to DR001, Request Item 5 showing completed fire hydrant flushing at 6-month cycles within the year 2022 and the access roadway is maintained clear of storage and debris.

Figure 10: Access Road - West

Figure 11: Access Road - North

This initiative has been reviewed and considered "Validated."

7.3.6 Grid Operations and Protocols:

Through their third-party Wildfire Mitigation Assessment in 2020, TBC identified that the local fire response may have limited capability to address a flammable/combustible liquid fire requiring Class B firefighting foam. As a result of this finding, TBC opted to contract with Perimeter Solutions to provide a Phos-Check Dual Agent Trailer to aid in firefighting operations at the facility. Prior to the 2023 IE site visit, a metal canopy was constructed on the West end of the Receiving Warehouse Building to house and protect the Phos-Check Trailer from weather and to avoid damage and degradation of the equipment. It was witnessed during the IE visit that pallets of cable are being stored in front of the trailer that will interfere with emergency deployment of the fire protection trailer and would recommend keeping access to the trailer free from storage.

Providing fire protection within the Spare Parts Building was also part of the third-party assessment in 2020. The IE witnessed the partial installation of a Novec 1230 clean agent fire suppression system during our site visit on May 18th and were notified that inspections and testing with the local fire prevention office were pending. The IE was unable to verify system acceptance by the local fire prevention office through Data Requests.

Of note, compartment integrity is crucial to the successful testing and operation of a Novec 130 clean agent system and therefore leakage of the building enclosure must be controlled. Buildings of similar construction types have traditionally proven difficult to seal sufficiently for commissioning of systems.

Figure 12: Spare Parts Building

Figure 13: Clean Agent System Tanks

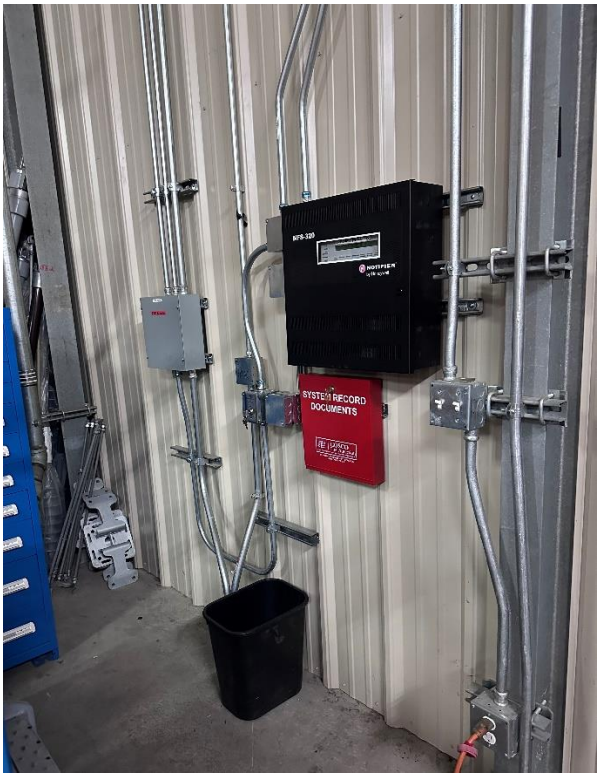


Figure 14: Clean Agent System Panels

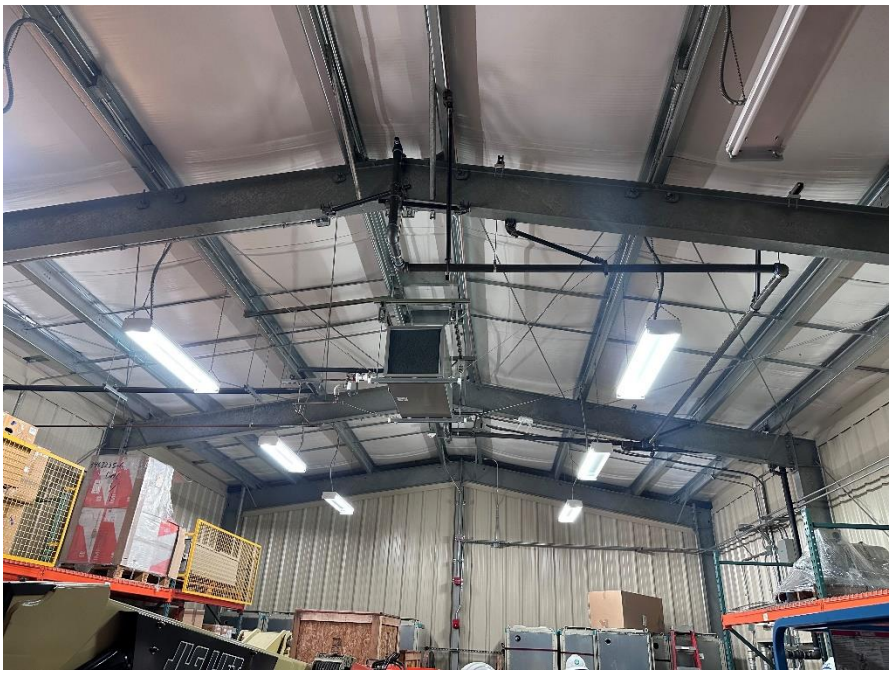


Figure 15: Clean Agent System Piping

This initiative has been reviewed and considered "Substantially Validated" pending final fire department inspections.

Initiative activities not explicitly categorized in WMP.

The following categorized mitigation activities are not specifically addressed in section 7.3.2 of TBC's WMP but are included in dialog within the plan. The IE is providing an assessment of the following items.

Asset Management and Inspections:

TBC's WMP provided a general description of the continuation of weekly inspections of the converter station's fire suppression systems and the overall status of the facility's general condition. The inspections assure the functionality and the condition of its components. Upon the IE site visit in May of 2023, visual confirmation was made of current state required fire protection system maintenance inspections on system risers and foam fire protection trailer training logs and maintenance documents by Perimeter Solutions were provided. Based on the received information, the IE has evaluated the inspections and has determined the inspections to be “Validated”.

Vegetation Management:

The IE submitted a data request that addressed vegetation maintenance documentation specific to TBC's [redacted] facility to validate TBC's vegetation management and weed abatement activities within the [redacted] Converter Station walls, including the use of pre-emergent and herbicide for the prevention of vegetative growth. It was visually confirmed and a data request response to DR001, Request Item 6 provided quarterly abatement records that such methods are used and enforced at the facility. The [redacted] facility has limited opportunities for vegetation growth within the facility's walls. TBC is located in an urban/industrial environment, and its transmission facilities are either buried or submerged beneath the Bay Area waters. TBC's concrete perimeter wall is used as a fire barrier/break to protect the facility from a fire burning in the fuels from other properties. Although a small amount of weeds were visible in the 180-kV Yards, the facility is not viewed by the IE as having an extreme wildfire threat to the facility. The IE has determined that the stakeholder and community engagement activities are “Validated”.

Data Governance

Trans Bay has demonstrated by consistently providing requested documents that they understand the importance of safely and securely gathering, storing, processing and disposing of information important to provide a reliable energy resource for stakeholders and customers. TBC has continued to provide requested operational information regarding fire protection and prevention with system construction documents, manufacturer data sheets and training logs in a timely manner during independent evaluations. The IE has determined that the stakeholder and community engagement activities are “Validated”.

Resource Allocation Methodology

Trans Bay has continued to show dedication to providing a safe working environment by voluntarily allocating resources to increase overall operational safety with improvements such as hiring third party consultants, installing fire suppression systems, providing safe storage of compressed gases, lightning protection and proper storage structures of fire protection equipment. The IE has determined that the stakeholder and community engagement activities are “Validated”.

Emergency Planning and Preparedness:

TBC’s Emergency Planning and Preparedness program is evident based on requested documents such as training logs and emergency action plans provided in response to Data Request DR001, Request 1 showing company training programs and certifications along with the engagement of local fire prevention offices for training for specialized on-site fire hazards. TBC also coordinates emergency planning and response details closely with CAISO and PG&E and maintains Emergency Action Plans that comply with the California Public Utilities Code, Cal/OSHA and National Fire Protection Association (NFPA) 850. CAISO restoration drills were completed on February 3, 2022 and transcripts provided to the IE as part of the DR001 response.

TBC has also increased its emergency preparedness by engaging with third-party consultants, purchase and maintenance of on-site suppression equipment and engagement with local fire departments for emergency training. The IE has determined that the emergency planning and preparedness activities are “Validated”.

Stakeholder Cooperation and Community Engagement

Trans Bay is a transmission-only utility which does not serve end-use customers or have a traditional service territory. As a result, Trans Bay does not anticipate providing customer support or engage with communities during an emergency. However, Trans Bay has protocols for communication and coordination with its primary stakeholders, including the CAISO and PG&E. Trans Bay’s H&S Emergency Action Plans provided as a data request response provides detailed protocols for communication between TBC staff and local emergency responders and CAISO and PG&E.

The IE has determined that the stakeholder and community engagement activities are “Validated”.

3.1.5.2 Trends and Themes

Through the IE's onsite assessment and observations and the review of documentation requested by the IE in data requests, the IE has determined that the [redacted] Facility meets the outlined activities of TBC's 2022 WMP and is considered validated.

3.2 Verification of Funding

The IE reviewed Table 3.1-1 – Summary of the 2022 WMP Expenditures – Total and Table 3.1-2 – Summary of WMP Expenditures by Category provided in the WMP. The following table demonstrates the IE's findings.

Table 02: 2022 WMP Funding Verification Summary

Initiative Category	2022 Initiative Number	Initiative Name	2022 WMP Page Number	Funding Discrepancy Amount	Detail on Funding Discrepancy
Risk Assessment and Mapping	7.3 (1)	Compressed Gas Storage	63	$10,000	2022 Completion of a 2020 WMP initiative
Grid Operations and Protocols	7.3 (6)	Spare Parts Building Fire Protection System	66	$600,000	2022 Completion of a 2020 WMP initiative

As demonstrated in the above table, risk assessment and mapping and grid operations completed initiatives from the TBC 2020 WMP. The 2022 WMP planned spend was under the actual spend for years 2020 and 2021 for Risk Assessment and Mapping and Grid Operations and Protocols. Completing fire prevention initiatives of compressed gas storage and fire suppression systems were considered a priority for 2022 fire prevention improvements at the facility. The 2020 risk analysis by the third-party consultant concluded that storage of compressed gas cylinders within the Spare Parts presented an unnecessary fire risk to the building and suggested a fire protection system. TBC staff subsequently determined a water based fire suppression system was not compatible with the commonly stored parts and therefore solicited proposals for a clean agent system with detection throughout the Spare Parts Building. Supply chain issues and vendor availability were cited as reasons for the delay in system construction.

Through a comparative analysis of information provided in the TBC 2022 WMP, it is demonstrated that funding activities are associated with Risk Assessment and Mapping

and Grid Operations and Protocols. The IE has confirmed that TBC has funded 100% of all commitments/initiatives targeted in the 2022 WMP.

3.3 Verification of QA/QC Programs

As stated within the 2022 WMP, Trans Bay Cable intended to complete two important initiatives originally planned for the 2020 TBC WMP. Construction project for categories Risk Assessment and Mapping and Grid Operations were target for completion at the Spare Parts Building of the [redacted] Substation.

The relocation of compressed gas cylinders from the Spare Part Building as part of the 2020 Risk Assessment has been completed with the installation of a compressed gas storage cage beneath the new foam fire protection storage area adjacent to the Receiving Warehouse. The completed installation was viewed by the IE staff during the May 18th, 2023 site visit for completeness.

A new clean agent fire suppression system has been installed throughout the Spare Parts building for protection of sensitive parts and equipment. Plans prepared by COSCO Fire Protection were provided to the IE as part of the data request process and TBC staff informed the IE that final testing and inspections have not yet been completed. Data requests did not include fire department approved plans or inspections and testing records. All IE verifications has been completed by IE visual inspections along with data requested documentation.

Table 03: QA/QC Verification Summary Table

Initiative Name	Initiative Validation	Finding	QA/QC Program Type
Compressed Gas Storage	Storage Unit Visual inspection	Validated	Visual Inspection
Spare Parts Building Fire Protection	Fire Suppression System Fire Department Approvals	Substantially Validated (substantially due to pending fire department inspections)	Data Requests

4. CONCLUSION

Through the IE onsite assessment, data requests, and public and non-public documentation review, it is determined that TBC has completed activities outlined in their 2022 WMP or is in the process of completion. TBC interconnects with Pacific Gas and Electric (PG&E) substations in [redacted] and San Francisco via underground Alternating Current (AC) transmission cables. TBC has no transmission or distribution line. All above-ground transmission infrastructure is fully contained within the walls of the systems converter stations. All current-carrying conductors are entirely contained within the footprint of the AC/DC Converter Station perimeter 12 ft. concrete wall.

TBC activities categorized or generally covered within the WMP include:

- Risk Assessment and Mapping
- Situational Awareness and Forecasting
- Grid Design and System Hardening
- Grid Operations and Protocols

These activities outlined in TBC's 2022 WMP have been reviewed and confirmed by the IE and have been demonstrated to meet the intent of reducing or eliminating the impact of the fire that would have a likelihood of extending from the TBC Facility and engaging off-site fuels. TBC fire prevention metrics are focused on utilizing existing operational data, metrics, and practices to focus on general fire prevention and maintaining equipment integrity to preclude the potential for ignition events. This philosophy of fire prevention strategy has been demonstrated to be successful due to the lack of historical fire events at the facility.

Table 04: IE Findings Summary

SOW Category	2022 Initiative Number	Initiative Name	Finding	Detail on finding
Risk Assessment and Mapping	7.3 (1)	Compressed Gas Cylinder Relocation	Validated	Cylinders relocated to covered storage at Receiving Warehouse within a compressed gas storage cage with lock.
Situational Awareness and Forecasting	7.3 (2)	System Operator Qualifications	Validated	Training records and initial System Operator Qualification records

				provided though data request.
Grid Design and Hardening	7.3 (3)	Access Roadway Maintenance	Validated	Records of site fire hydrant maintenance provided though data request and road visually validated on site visit.
Grid Operations and Protocols	7.3 (6)	Clean Agent Fire Suppression System	Substantially Validated	Plans appear complete and system professionally installed. Testing and inspections pending.

5. APPENDICES

Appendix A

Appendix A: List of Supplemental Documents Reviewed

Item No.	Documents Reviewed	Document Date
1	TBC's Annual Report (ARC) on Compliance for 2022 Wildfire Mitigation Plan	March-22
2	TBC's 2022 TBC-H-103 Annex A Wildfire Mitigation Plan	August-22
3	BVNA Data Request 001 and Response for TBC QA/QC Programs	May-23

Appendix B

Appendix B: Field Photos From Field Visit May 18th, 2023

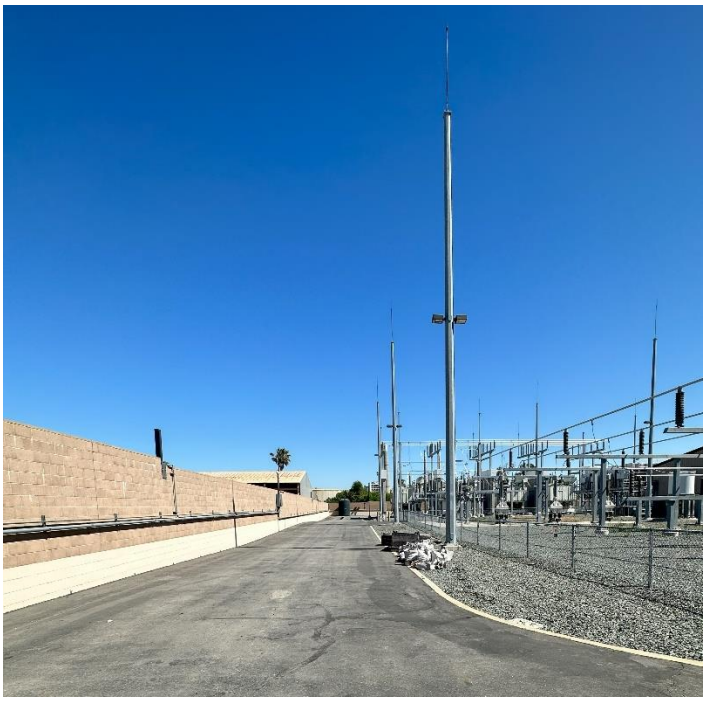
Item No.	Photo Description
1	Receiving Warehouse Building
2	Receiving Warehouse Building, Covered Foam Trailer Storage, Compressed Gas Storage and SW Gate
3	Spare Parts Storage Building
4	180-kV Yard
5	Access Roadway West and Lighting Protection
6	230-kV Risers and Circuit Breakers
7	200-kV DC Yard

Appendix Figure 1: Receiving Warehouse

Appendix Figure 2: Receiving Warehouse Foam Trailer Storage and SW Exit Gate

Appendix Figure 3: Spare Parts Storage Building

Appendix Figure 4: 180-kV Yard



Appendix Figure 5: Access Roadway West and Lightning Protection

Appendix Figure 6: 230-kV Risers and Circuit Breakers

Appendix Figure 7: 200-kV DC Yard

Appendix C

Data Requests and Responses

DATA REQUEST & RESPONSE for Trans Bay Cable LLC Converter Station; [redacted], CA

Data Request Number: 001	**Data Request Date: 05.25.2023**
Name [redacted]	Email: [redacted]
Title:	Phone [redacted]
Company: Bureau Veritas	Preferred Point of Contact: Email or Phone

Program Target	Data Request	DR Response
1. Emergency Planning and Preparedness and Fire Protection	Requesting Training documents associated with the Enhanced Fire Awareness, Prevention, and Training Campaigns for TBC Operations Staff, including: TBC- HS- 103 Fire Prevention TBC- HS- 200 Emergency Action Plan TBC- OP- 004 Emergency Operations TBC- MP- 741 Fire System TBC- OP- 020 Asset Monitoring & Protection	TBC Response: Uploaded to the Shared folder on Bureau Veritas' FTP site is a folder entitled TBC Response to C2 Group DR- 001_Request 1, which contains the following subfolder and documentation: •TBC LMS_Fire Training Report 2022- showing fire training completed by System Operations staff •2021- Standard Dual Agent Foam Trailer Operations and Maintenance oTBC- Perimeter Solutions Training Roster 08.11.22 •System Operators Emergency Action Plan Training Roster 05.11.2022 •Emergency Action Plan Training- 2022 •CAISO restoration drill 2022 screenshot_Redacted

Program Target	Data Request	DR Response
2. Emergency Planning and Preparedness	We request training documents, including curriculum and records for onsite "System Operators."	TBC Response: See training docs in DR001.
3. Emergency Planning and Preparedness	Provide documentation for emergency preparedness training frequency, familiarity and drills with local emergency responders and those associated with the local mfire department and mutual aid/automatic aid programs.	TBC Response: TBC's [redacted] Station is located in an urban/industrial area within 10 minutes driving distance from two county fire stations. As TBC's operations are limited in scale and scope, TBC has periodic engagement with the local fire department. In December 2020, TBC procured a class B foam firefighting trailer. In Q3 of 2021, TBChosted the Contra Costa Fire Department(CCFD)at the [redacted] converter station to provide the training to 12 Fire Responders on how to properly deploy and use the firefighting trailer and provided a site walk to identify oil filled instruments where the trailer would be used in the case of fire. TBC is currently working with the CCFD to schedule a site visit for the [redacted] Station for 2023.Uploaded to the Shared folder on Bureau Veritas' FTP site is a folder entitled TBC Response to C2 Group DR-001_Request 3, which contains the following documentation:•Trans Bay Cable Fire Dept Info•"2021-Standard Dual Agent Foam Trailer Operations and Maintenance"which reflects the training provided to the CCFDon TBC's firefighting trailer(this document was already provide in response to C2 Group DR-001_Request 1)Based on the limited footprint and scope of TBC's operations, TBC does not have any mutual aid/automatic aid programs.

Program Target	Data Request	DR Response
4. Fire Protection - Spare Parts Building fire sprinkler system.	Requesting fire protection system plans, calculation and inspection records for the new clean agent fire protection system in the Spare Parts Building.	TBC Response: Uploaded to the Shared folder on Bureau Veritas' FTP site is a folder entitled TBC Response to C2 Group DR-001_Request 4, which contains the following documentation:•20SE0816 CLEAN AGENT R1 PittTBC notes that the suppression system is installed but is currently in the final testing and completion phase before it is fully commissioned.
5. Fire Protection - Onsite fire hydrants.	We are requesting maintenance records for onsite fire hydrants.	TBC: Below is a screenshot from TBC's Asset Management Program which reflects the recording of on-site fire hydrant maintenance which occurred in 2022.
6. Fire Prevention – Vegetation Management.	Requesting maintenance records and schedules for weed prevention spraying and abatement both on-site and along the perimeter walls of the facility.	TBC: Below is a screenshot from TBC's Asset Management Program which reflects the recording of vegetation/weed abatement efforts which occurred in 2022.