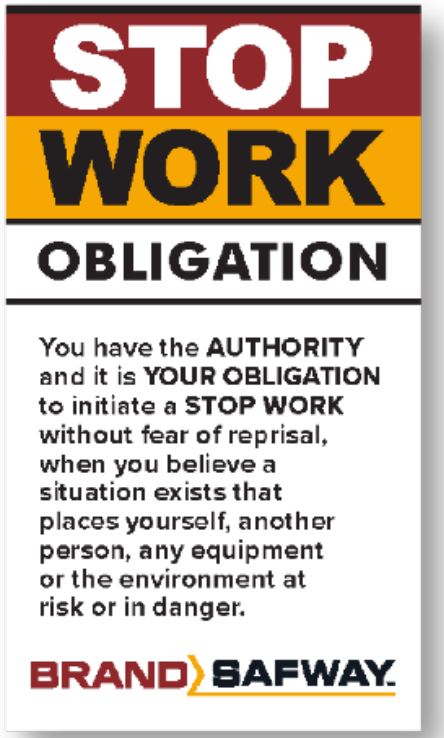
Diamond
THERMAL SYSTEMS™
BY BRAND SAFWAY

Heat Trace Audit Services

Safety – always first and foremost

We believe safety is key to increased productivity

World-class safety processes and tools to engage the entire workforce.



- Accountability for Life-Saving Rules
- Stop Work Obligation
- Most comprehensive craft-specific training
- Safety leadership in the field
- Tracking of leading indicators
- Behavior-based observations at all levels

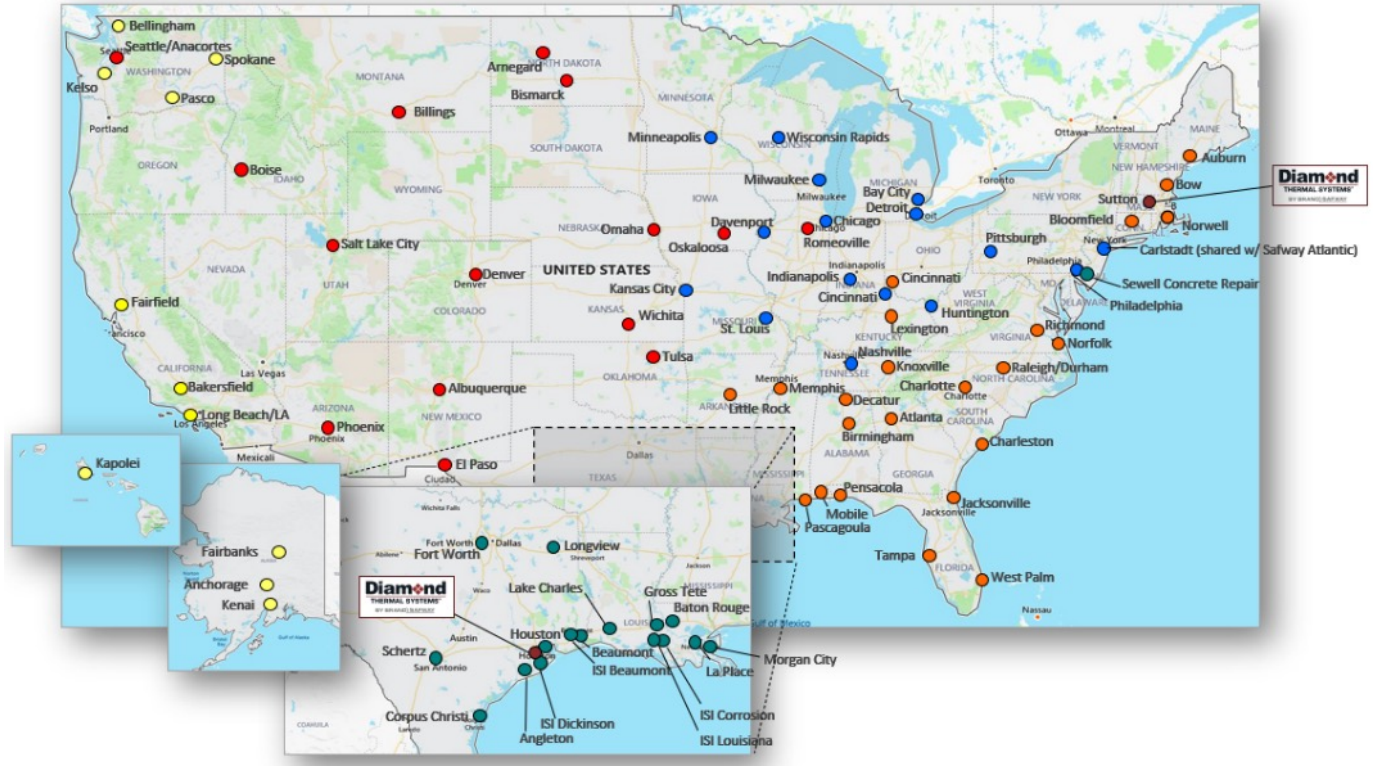
Agenda

1. Diamond Team
2. Compliance Trends
3. Risk Mitigation
   - Audit Services
   - Audit Report
4. Operations
   - DTS & BrandSafway Value Model
   - Continuous Monitoring – Remote/Onsite

Who is Diamond Thermal Systems™ ?

Established heat tracing contractor that operates within national BrandSafway branch network

- **Background:** "Diamond" is a heat tracing contractor founded in 2003 and purchased by BrandSafway through the Brace Industrial acquisition in '21
- **Go to Market:** positioned as national heat trace product and service business with focus on "turn key" heat trace audit, design and field services support throughout BrandSafway branch network.



Diamond THERMAL SYSTEMS™ BY BRAND SAFWAY

ATCOME ADVANCED THERMAL CONTROL & OPTIMIZATION

Both names are trademarks of BrandSafway

Diamond Thermal Systems Offerings

Complete Turn-Key Heat Trace Service and Product Provider

Diamond THERMAL SYSTEMS™ BY BRAND SAFWAY

Heat Tracing

- Freeze Protection and Process Maintain
- Electric and Steam Tracing
- Tubing Bundle, Sample Lines, and CEMS bundles
- Design and Engineering
- Audit Services
- Troubleshooting
- Repairs
- MI Cable Welds
- New Construction
- Product Sales

Power Distribution

- ATCOM Heat Trace Control Panel Manufacturing
- Power Distribution Engineering and Design
- Installation and Commissioning

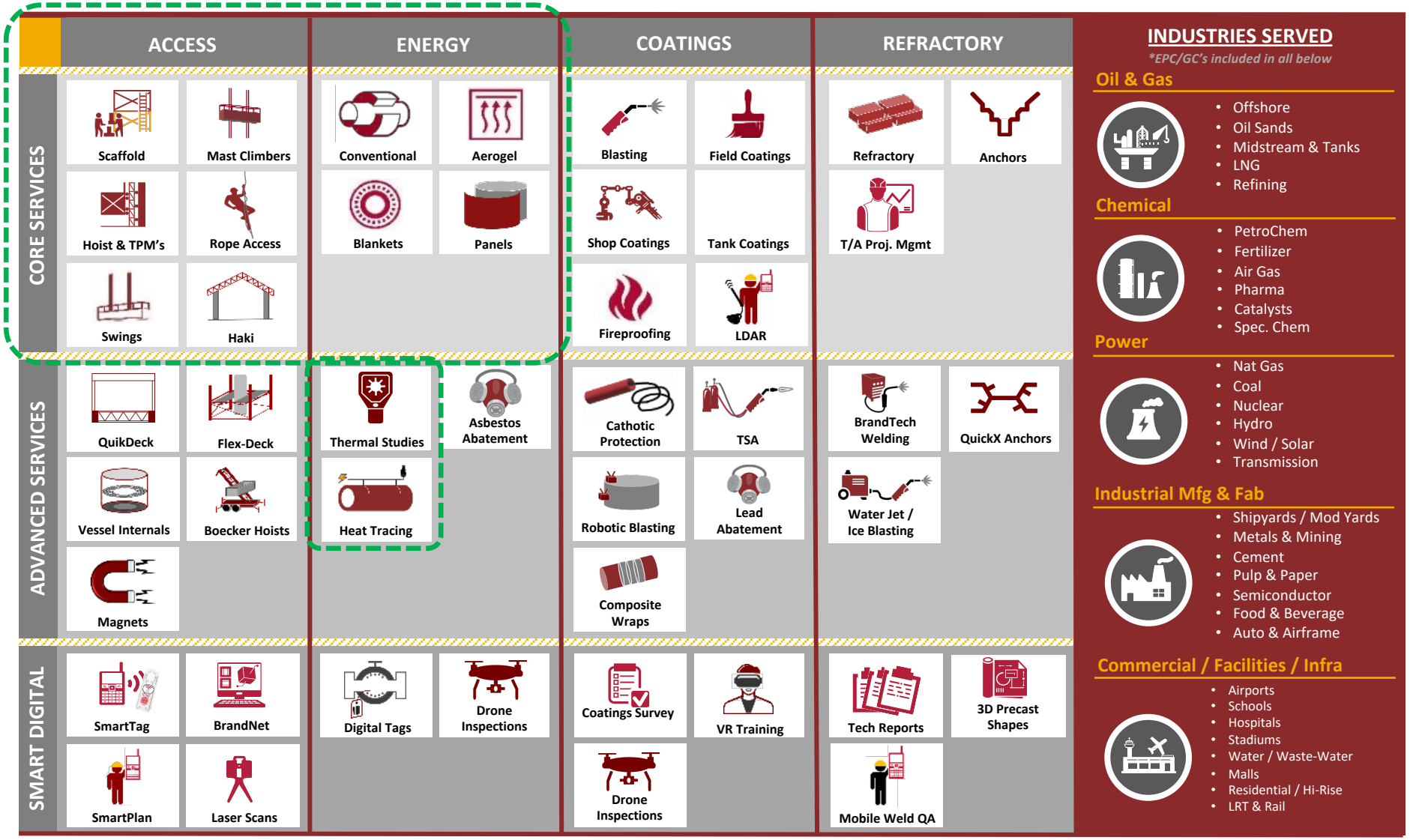
Turn-Key Project Management Execution

- Competitive package pricing
- Heat Tracing
- Power Distribution
- Insulation
- Scaffold / Access
- Coatings

Heat Trace Consultants & Experts

BrandSafway Service Lines/Industries Served

Complete Suite of AECR+ Services



Compliance

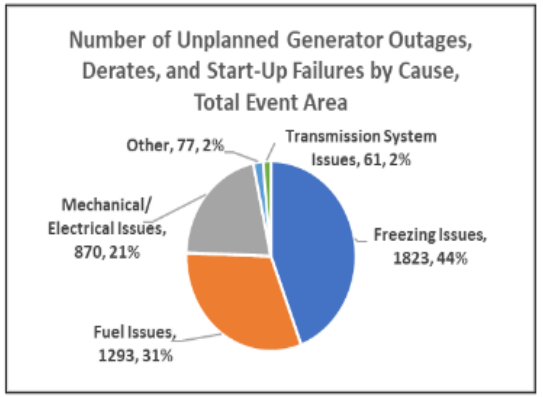
Winter 2021 Freeze – what went wrong?

February 2021 Cold Weather Grid Operations: Preliminary Findings and Recommendations

FERC, NERC and Regional Entity Joint Staff Inquiry

What Went Wrong - Preliminary Key Findings
1. Generation Freezing Issues

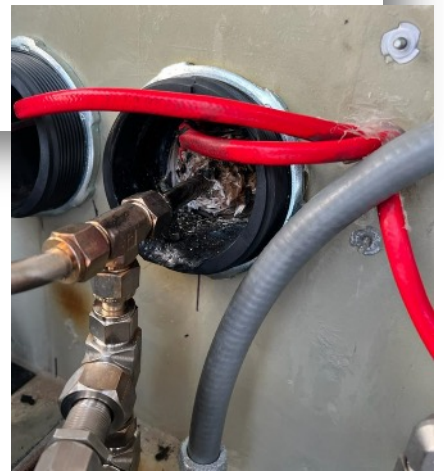
- Largest cause: freezing issues
- Largest sub-causes were frozen instrumentation and wind turbine blade icing.
- Analysis of Mechanical/ Electrical Issues revealed a relationship between generating unit outages and decreasing temperatures.



What Went Wrong - Preliminary Key Findings
3. Natural Gas and Electric Reliability Interdependency

- Natural gas production facility loss of power was primarily due to weather-related power line outages and firm load shed.
- 60% of natural gas-fired generating units affected by fuel supply issues had outages, derates, or failures to start by February 14, and 32% had fuel supply issues before and after February 14.

Natural gas fuel supply reductions caused the outages/derates/failures to start:	2/8 - 2/14 Prior to Firm Load Shed	2/15 - 2/20 Firm Load Shed (2/15 - 2/18)
Total Individual Generating Units	**213**	**258**
ERCOT BA Footprint	111	134
SPP Footprint	91	103
MISO South Footprint	11	21



Source: https://ferc.gov/february-2021-cold-weather-grid-operations-preliminary-findings-and-recommendations

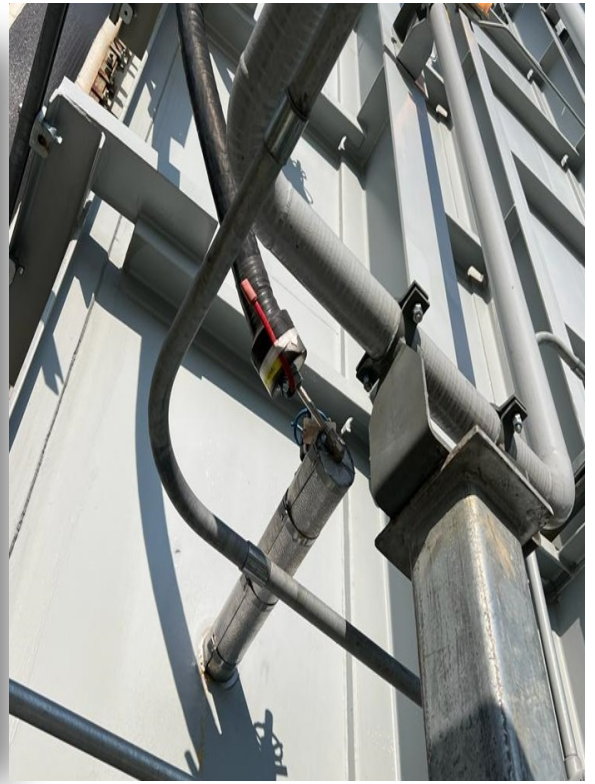
2021 - the Event that Changed Heat Trace

… NERC prelim recommendations from '21 freeze….

Preliminary Recommendations

- 28 Recommendations, which include:
  - Nine key recommendations, including Reliability Standards changes
  - Five recommendations for further study
- Each have recommended timeframes for implementation
  - before Winter 2021/2022
  - before Winter 2022/2023
  - before Winter 2023/2024

  } Most are recommended within these timeframes
- Some could extend beyond winter 2023-2024, but should be completed as soon as possible



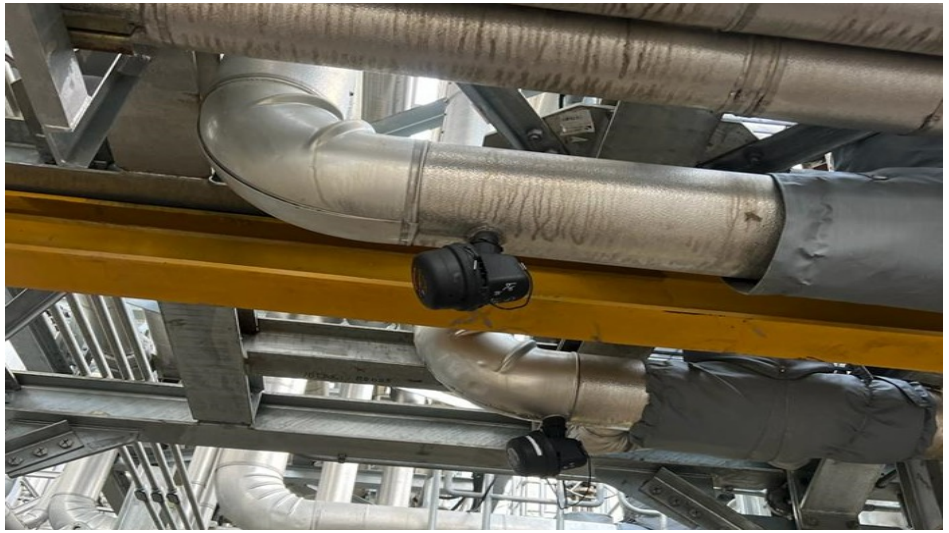
New NERC standards mandated a facility heat trace audit on overall condition of heat trace systems

Precursor to Delivering Facility Reliability

Modifications & Updates provided as a result of DTS projects…..

What Does Freeze Protection Mean?

- Change Design Ambient Temperature to -20F with a freeze event for 96 hours
  - Most plants were designed to 10F to 20F with a freeze event 24-36 hours
- Evaluate if the correct insulation is used for the design and application
- Add more insulation to existing lines - potential high cost
- Add more heat trace lines and wattage - can panels handle more circuits
- Placing critical transmitters in heated enclosures



Compliance: the 2022 “Christmas Freeze” …

…the Second Event that Changed Heat Trace

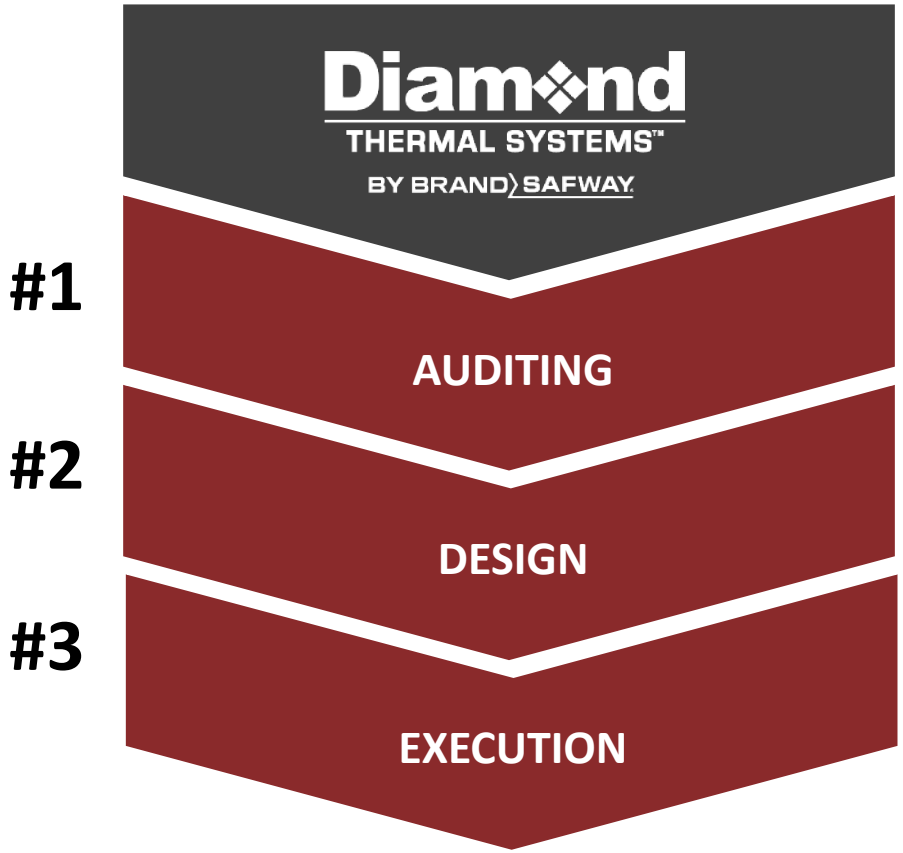
Results of ill-preparedness…

- Multiple plant unplanned outages leading to….
- Record number of fines across several states – in excess of $100m in penalties
- Add’l New NERC Requirements
- MW Pricing at historical levels – at times in excess of $3,000/MWhr

Heat Trace Risk Mitigation

Diamond Thermal Systems ™ Services Offering

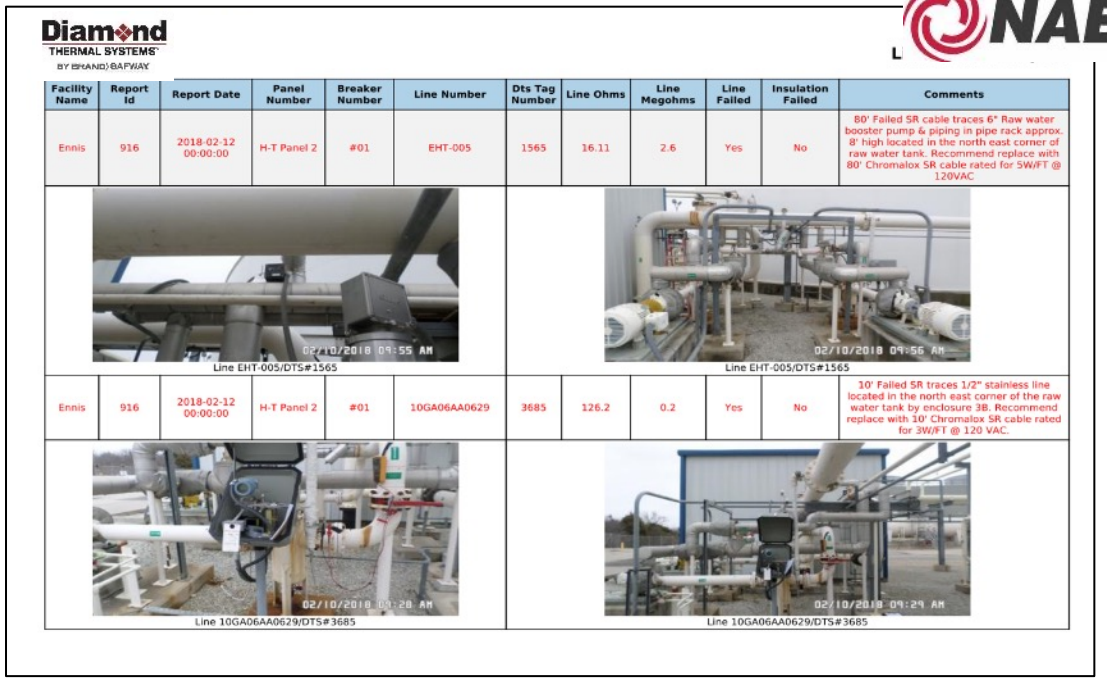
Complete Turn-Key Heat Trace System Services



Heat Trace Audits

…best in class audit program to drive plant reliability

- Heat Trace Audits are the best defense our customers have against freeze-ups during the cold winter months; large potential savings from having to do emergency repairs.
- Audits are designed to review the entire heat trace system & report on critical areas requiring preemptive service.
- The Heat Trace Audit Evaluates the following:
  - Power Distribution Panels
  - Power Junction Boxes and Heat Trace Cables
  - Insulation Systems
- Customer will receive details on entire heat trace system, with pictures, findings, and professional recommendations to address the problem.
- Also receive pricing for a complete turnkey service including Heat Trace, Insulation, and Scaffold services required to complete any repair.
- Diamond is Manufacture Neutral – we provide service and support regardless of equipment OEM

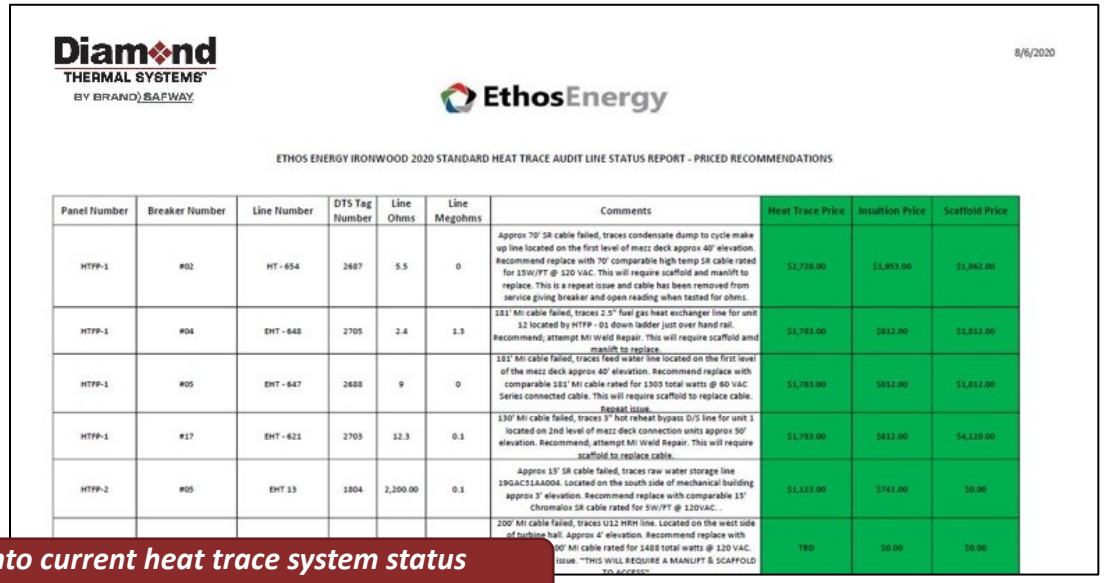


Diamond THERMAL SYSTEMS BY BRAND SAFWAY

Facility Name	Report Id	Report Date	Panel Number	Breaker Number	Line Number	Dts Tag Number	Line Ohms	Line Megohms	Line Failed	Insulation Failed	Comments
Ennis	916	2018-02-12 00:00:00	H-T Panel 2	#01	EHT-005	1565	16.11	2.6	Yes	No	80' Failed SR cable traces 6" Raw water booster pump & piping in pipe rack approx. 8' high located in the north east corner of raw water tank. Recommend replace with 80' Chromalox SR cable rated for 5W/FT @ 120VAC
Ennis	916	2018-02-12 00:00:00	H-T Panel 2	#01	10GA06AA0629	3685	126.2	0.2	Yes	No	10' Failed SR traces 1/2" stainless line located in the north east corner of the raw water tank by enclosure 3B. Recommend replace with 10' Chromalox SR cable rated for 3W/FT @ 120 VAC.

Line EHT-005/DTS#1565 — Line EHT-005/DTS#1565

Line 10GA06AA0629/DTS#3685 — Line 10GA06AA0629/DTS#3685



Diamond THERMAL SYSTEMS BY BRAND SAFWAY

EthosEnergy

8/6/2020

ETHOS ENERGY IRONWOOD 2020 STANDARD HEAT TRACE AUDIT LINE STATUS REPORT - PRICED RECOMMENDATIONS

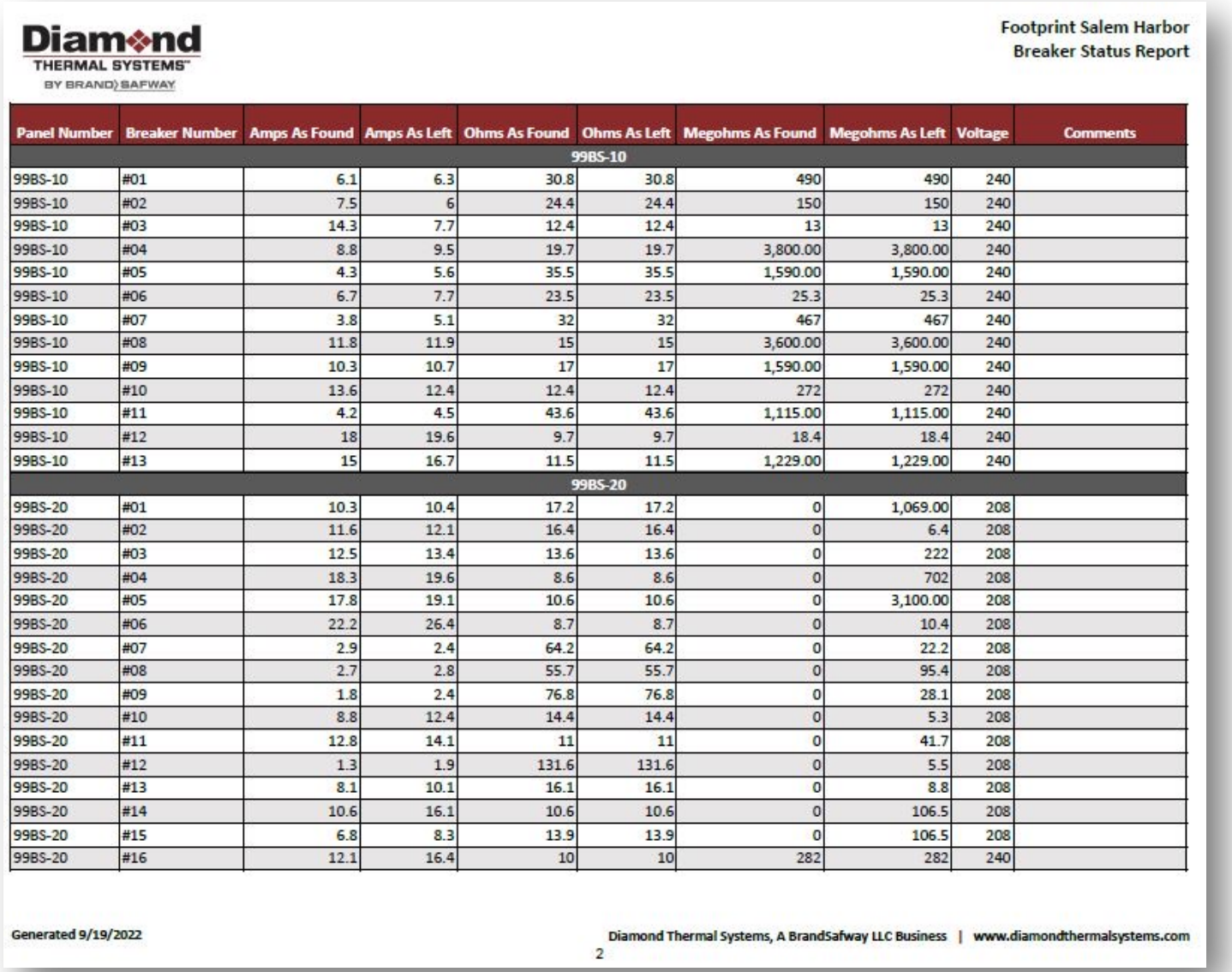
Panel Number	Breaker Number	Line Number	DTS Tag Number	Line Ohms	Line Megohms	Comments	Heat Trace Price	Insultion Price	Scaffold Price
HTFP-1	#02	HT - 654	2687	5.5	0	Approx 70' SR cable failed, traces condensate dump to cycle make up line located on the first level of mezz deck approx 40' elevation. Recommend replace with 70' comparable high temp SR cable rated for 15W/FT @ 120 VAC. This will require scaffold and manlift to replace. This is a repeat issue and cable has been removed from service giving breaker and open reading when tested for ohms.	$2,728.00	$1,953.00	$1,862.00
HTFP-1	#04	EHT - 648	2705	2.4	1.3	101' MI cable failed, traces 2.5" fuel gas heat exchanger line for unit 12 located by HTFP - 01 down ladder just over hand rail. Recommend; attempt MI Weld Repair. This will require scaffold amd manlift to replace.	$1,783.00	$812.00	$1,812.00
HTFP-1	#05	EHT - 647	2688	9	0	181' MI cable failed, traces feed water line located on the first level of the mezz deck approx 40' elevation. Recommend replace with comparable 181' MI cable rated for 1303 total watts @ 60 VAC Series connected cable. This will require scaffold to replace cable. Repeat issue.	$1,783.00	$812.00	$1,812.00
HTFP-1	#17	EHT - 621	2703	12.3	0.1	130' MI cable failed, traces 3" hot reheat bypass D/S line for unit 1 located on 2nd level of mezz deck connection units approx 50' elevation. Recommend, attempt MI Weld Repair. This will require scaffold to replace cable.	$1,783.00	$812.00	$4,120.00
HTFP-2	#05	EHT 13	1804	2,200.00	0.1	Approx 15' SR cable failed, traces raw water storage line 1DGAC51AA004. Located on the south side of mechanical building approx 3' elevation. Recommend replace with comparable 15' Chromalox SR cable rated for 5W/FT @ 120VAC. .	$1,123.00	$741.00	$0.00
						200' MI cable failed, traces U12 HRH line. Located on the west side of turbine hall. Approx 4' elevation. Recommend replace with [illegible]00' MI cable rated for 1488 total watts @ 120 VAC. [illegible]ssue. "THIS WILL REQUIRE A MANLIFT & SCAFFOLD TO ACCESS"	TBD	$0.00	$0.00

Best in class audit program provide insight into current heat trace system status providing visibility to system reliability and preventative maintenance

Heat Trace Audit Report Contents

Breaker Status Report

- The Breaker Status Report is designed to give customers a detailed overview of how their heat trace control panels are operating. Highlighted in red you will find breakers that did not pass industry testing thresholds, meanwhile any comments in green indicate any corrections
- Diamond Thermal Systems were able to make during the audit investigation.
- Any heat trace cable that did not pass testing thresholds would be identified in the comments as a DTS Tag #.



Diamond THERMAL SYSTEMS BY BRANDSAFWAY

Footprint Salem Harbor
Breaker Status Report

Panel Number	Breaker Number	Amps As Found	Amps As Left	Ohms As Found	Ohms As Left	Megohms As Found	Megohms As Left	Voltage	Comments
99BS-10									
99BS-10	#01	6.1	6.3	30.8	30.8	490	490	240	
99BS-10	#02	7.5	6	24.4	24.4	150	150	240	
99BS-10	#03	14.3	7.7	12.4	12.4	13	13	240	
99BS-10	#04	8.8	9.5	19.7	19.7	3,800.00	3,800.00	240	
99BS-10	#05	4.3	5.6	35.5	35.5	1,590.00	1,590.00	240	
99BS-10	#06	6.7	7.7	23.5	23.5	25.3	25.3	240	
99BS-10	#07	3.8	5.1	32	32	467	467	240	
99BS-10	#08	11.8	11.9	15	15	3,600.00	3,600.00	240	
99BS-10	#09	10.3	10.7	17	17	1,590.00	1,590.00	240	
99BS-10	#10	13.6	12.4	12.4	12.4	272	272	240	
99BS-10	#11	4.2	4.5	43.6	43.6	1,115.00	1,115.00	240	
99BS-10	#12	18	19.6	9.7	9.7	18.4	18.4	240	
99BS-10	#13	15	16.7	11.5	11.5	1,229.00	1,229.00	240	
99BS-20									
99BS-20	#01	10.3	10.4	17.2	17.2	0	1,069.00	208	
99BS-20	#02	11.6	12.1	16.4	16.4	0	6.4	208	
99BS-20	#03	12.5	13.4	13.6	13.6	0	222	208	
99BS-20	#04	18.3	19.6	8.6	8.6	0	702	208	
99BS-20	#05	17.8	19.1	10.6	10.6	0	3,100.00	208	
99BS-20	#06	22.2	26.4	8.7	8.7	0	10.4	208	
99BS-20	#07	2.9	2.4	64.2	64.2	0	22.2	208	
99BS-20	#08	2.7	2.8	55.7	55.7	0	95.4	208	
99BS-20	#09	1.8	2.4	76.8	76.8	0	28.1	208	
99BS-20	#10	8.8	12.4	14.4	14.4	0	5.3	208	
99BS-20	#11	12.8	14.1	11	11	0	41.7	208	
99BS-20	#12	1.3	1.9	131.6	131.6	0	5.5	208	
99BS-20	#13	8.1	10.1	16.1	16.1	0	8.8	208	
99BS-20	#14	10.6	16.1	10.6	10.6	0	106.5	208	
99BS-20	#15	6.8	8.3	13.9	13.9	0	106.5	208	
99BS-20	#16	12.1	16.4	10	10	282	282	240	

Generated 9/19/2022

Diamond Thermal Systems, A BrandSafway LLC Business | www.diamondthermalsystems.com

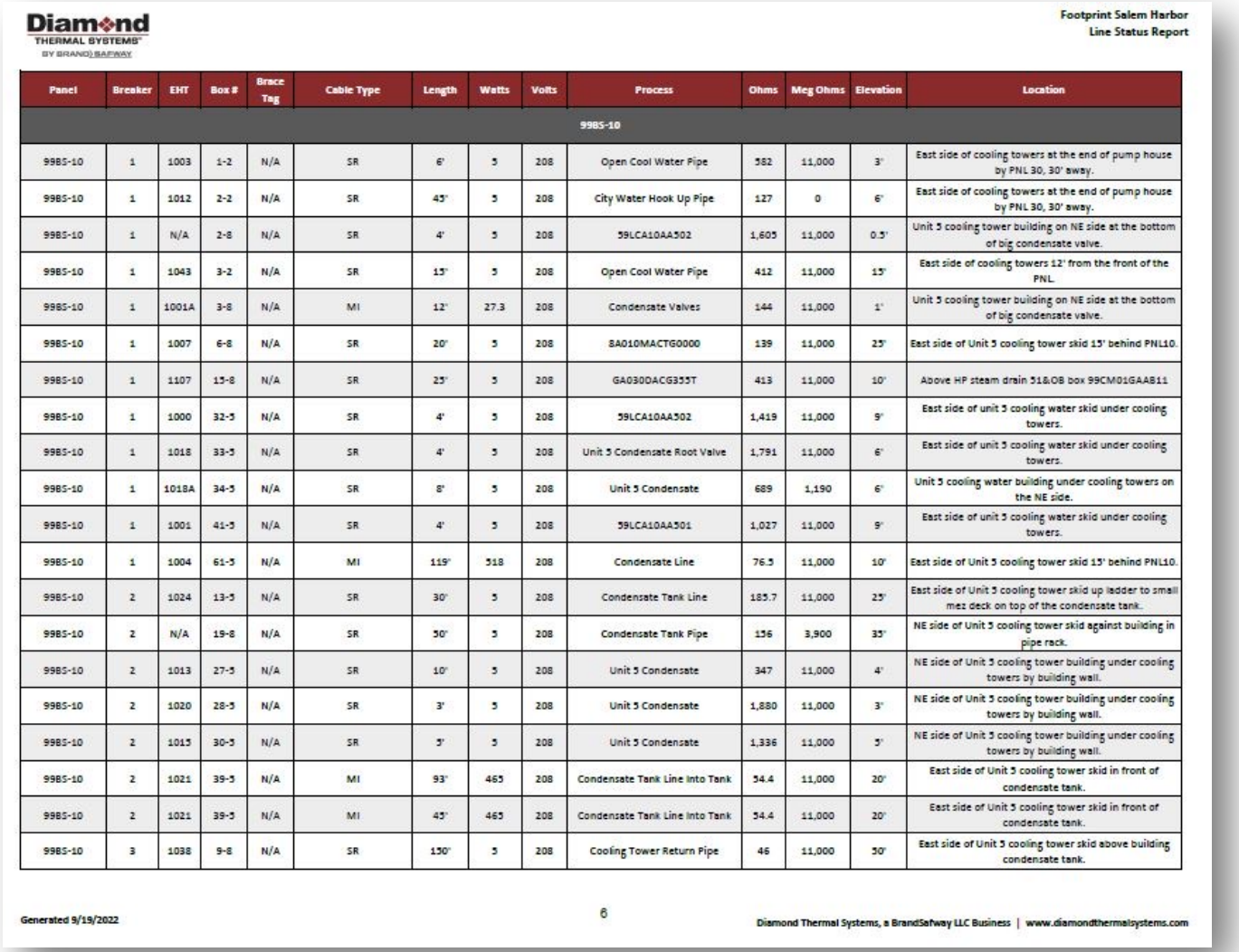
2

Heat Trace Audit Report Contents

Line Status Report

- The Line Status Report provides a detailed overview of all heat trace lines that were captured during the audit.

- This report identifies the panel, breaker, box number, heat trace type, length, watts per foot, voltage, test results, and a description as to the location of the line.



Diamond THERMAL SYSTEMS BY BRANDSAFWAY

Footprint Salem Harbor
Line Status Report

Panel	Breaker	EHT	Box #	Brace Tag	Cable Type	Length	Watts	Volts	Process	Ohms	Meg Ohms	Elevation	Location
99BS-10													
99BS-10	1	1003	1-2	N/A	SR	6'	5	208	Open Cool Water Pipe	582	11,000	3'	East side of cooling towers at the end of pump house by PNL 30, 30' away.
99BS-10	1	1012	2-2	N/A	SR	45'	5	208	City Water Hook Up Pipe	127	0	6'	East side of cooling towers at the end of pump house by PNL 30, 30' away.
99BS-10	1	N/A	2-8	N/A	SR	4'	5	208	59LCA10AA502	1,605	11,000	0.5'	Unit 5 cooling tower building on NE side at the bottom of big condensate valve.
99BS-10	1	1043	3-2	N/A	SR	15'	5	208	Open Cool Water Pipe	412	11,000	15'	East side of cooling towers 12' from the front of the PNL.
99BS-10	1	1001A	3-8	N/A	MI	12'	27.3	208	Condensate Valves	144	11,000	1'	Unit 5 cooling tower building on NE side at the bottom of big condensate valve.
99BS-10	1	1007	6-8	N/A	SR	20'	5	208	8A010MACTG0000	139	11,000	25'	East side of Unit 5 cooling tower skid 15' behind PNL10.
99BS-10	1	1107	17-8	N/A	SR	25'	5	208	GA030DACG355T	413	11,000	10'	Above HP steam drain 51&OB box 99CM01GAAB11
99BS-10	1	1000	32-5	N/A	SR	4'	5	208	59LCA10AA502	1,419	11,000	9'	East side of unit 5 cooling water skid under cooling towers.
99BS-10	1	1018	33-5	N/A	SR	4'	5	208	Unit 5 Condensate Root Valve	1,791	11,000	6'	East side of unit 5 cooling water skid under cooling towers.
99BS-10	1	1018A	34-5	N/A	SR	8'	5	208	Unit 5 Condensate	689	1,190	6'	Unit 5 cooling water building under cooling towers on the NE side.
99BS-10	1	1001	41-5	N/A	SR	4'	5	208	59LCA10AA501	1,027	11,000	9'	East side of unit 5 cooling water skid under cooling towers.
99BS-10	1	1004	61-5	N/A	MI	119'	518	208	Condensate Line	76.5	11,000	10'	East side of Unit 5 cooling tower skid 15' behind PNL10.
99BS-10	2	1024	13-5	N/A	SR	30'	5	208	Condensate Tank Line	185.7	11,000	25'	East side of Unit 5 cooling tower skid up ladder to small mez deck on top of the condensate tank.
99BS-10	2	N/A	19-8	N/A	SR	50'	5	208	Condensate Tank Pipe	156	3,900	35'	NE side of Unit 5 cooling tower skid against building in pipe rack.
99BS-10	2	1013	27-5	N/A	SR	10'	5	208	Unit 5 Condensate	347	11,000	4'	NE side of Unit 5 cooling tower building under cooling towers by building wall.
99BS-10	2	1020	28-5	N/A	SR	3'	5	208	Unit 5 Condensate	1,880	11,000	3'	NE side of Unit 5 cooling tower building under cooling towers by building wall.
99BS-10	2	1015	30-5	N/A	SR	5'	5	208	Unit 5 Condensate	1,336	11,000	5'	NE side of Unit 5 cooling tower building under cooling towers by building wall.
99BS-10	2	1021	39-5	N/A	MI	93'	465	208	Condensate Tank Line into Tank	54.4	11,000	20'	East side of Unit 5 cooling tower skid in front of condensate tank.
99BS-10	2	1021	39-5	N/A	MI	45'	465	208	Condensate Tank Line into Tank	54.4	11,000	20'	East side of Unit 5 cooling tower skid in front of condensate tank.
99BS-10	3	1038	9-8	N/A	SR	150'	5	208	Cooling Tower Return Pipe	46	11,000	50'	East side of Unit 5 cooling tower skid above building condensate tank.

Generated 9/19/2022

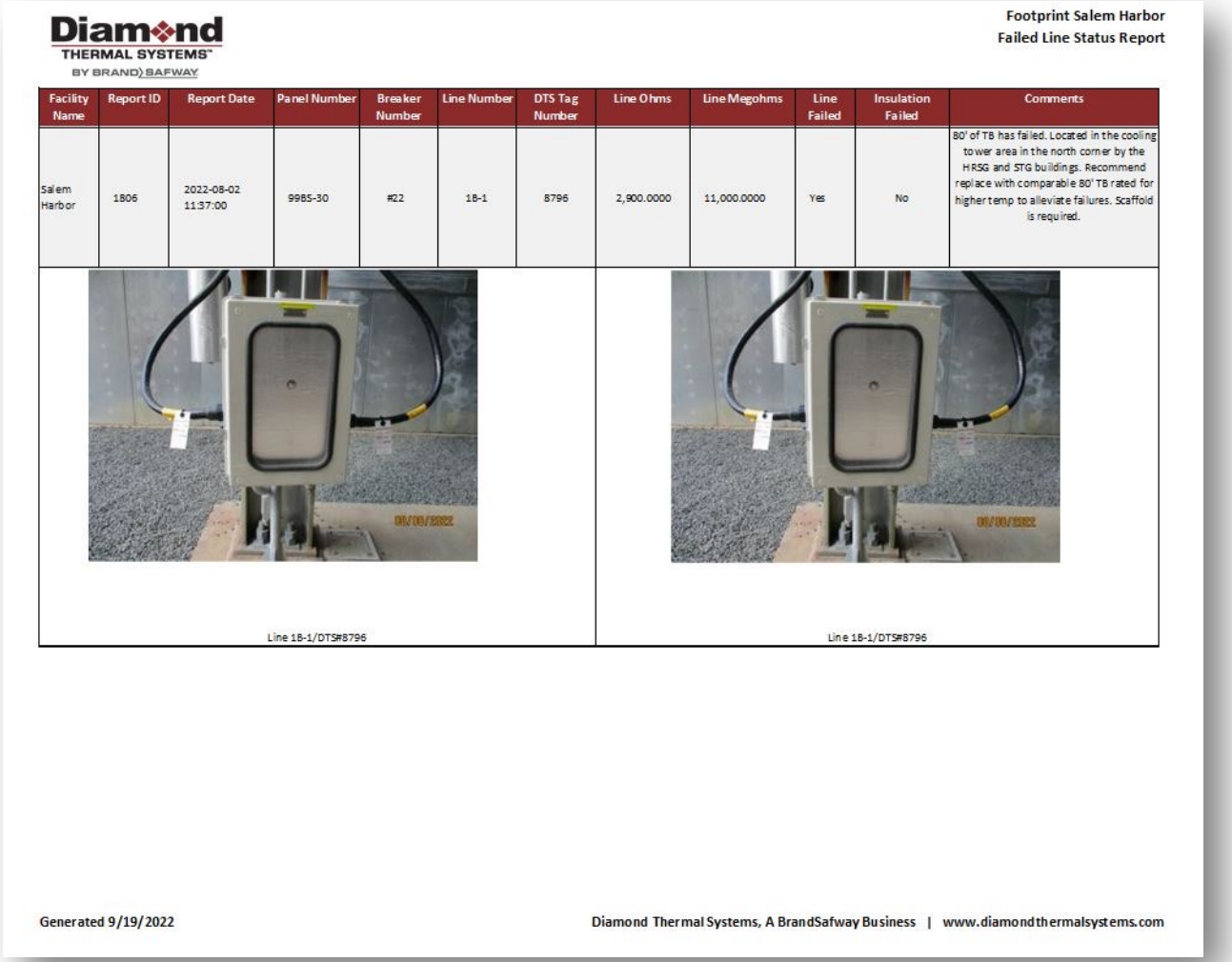
6

Diamond Thermal Systems, a BrandSafway LLC Business | www.diamondthermalsystems.com

Heat Trace Audit Report Contents

Failed Line Report

- This report provides high level details of all areas that were tagged as system failures.
- System failures are weaknesses in the system that if not addressed, will pose a threat to the integrity of the system or line.
- Diamond Thermal Systems provides picture images along with detailed recommendations so customers can visually see the affected equipment as well as Diamond Thermal
- Systems corrective action plan for the specific item identified.



Diamond THERMAL SYSTEMS BY BRANDSAFWAY

Footprint Salem Harbor
Failed Line Status Report

Facility Name	Report ID	Report Date	Panel Number	Breaker Number	Line Number	DTS Tag Number	Line Ohms	Line Megohms	Line Failed	Insulation Failed	Comments
Salem Harbor	1806	2022-08-02 11:37:00	9985-30	#22	1B-1	8796	2,900.0000	11,000.0000	Yes	No	80' of TB has failed. Located in the cooling tower area in the north corner by the HRSG and STG buildings. Recommend replace with comparable 80' TB rated for higher temp to alleviate failures. Scaffold is required.

Line 1B-1/DTS#8796

Line 1B-1/DTS#8796

Generated 9/19/2022

Diamond Thermal Systems, A BrandSafway Business | www.diamondthermalsystems.com

Heat Trace Audit Report Contents

Remediation Report

- The Remediation Report provides a complete Turn-Key pricing option based on our detail breakdown for each identified system weakness.
- This gives customers the ability to tailor their winterization repairs to their budget based on what they feel is most crucial to address.

Notes and Exemptions:

- Pricing is subject to review at the end of the calendar year.
- Pricing does not include Mobilization, Demobilization, or Indirects. DTS will submit a formal quote once customer has selected the repairs they would like addressed.

Diamond THERMAL SYSTEMS BY BRANDSAFWAY

Footprint Salem Harbor
Remediation Report

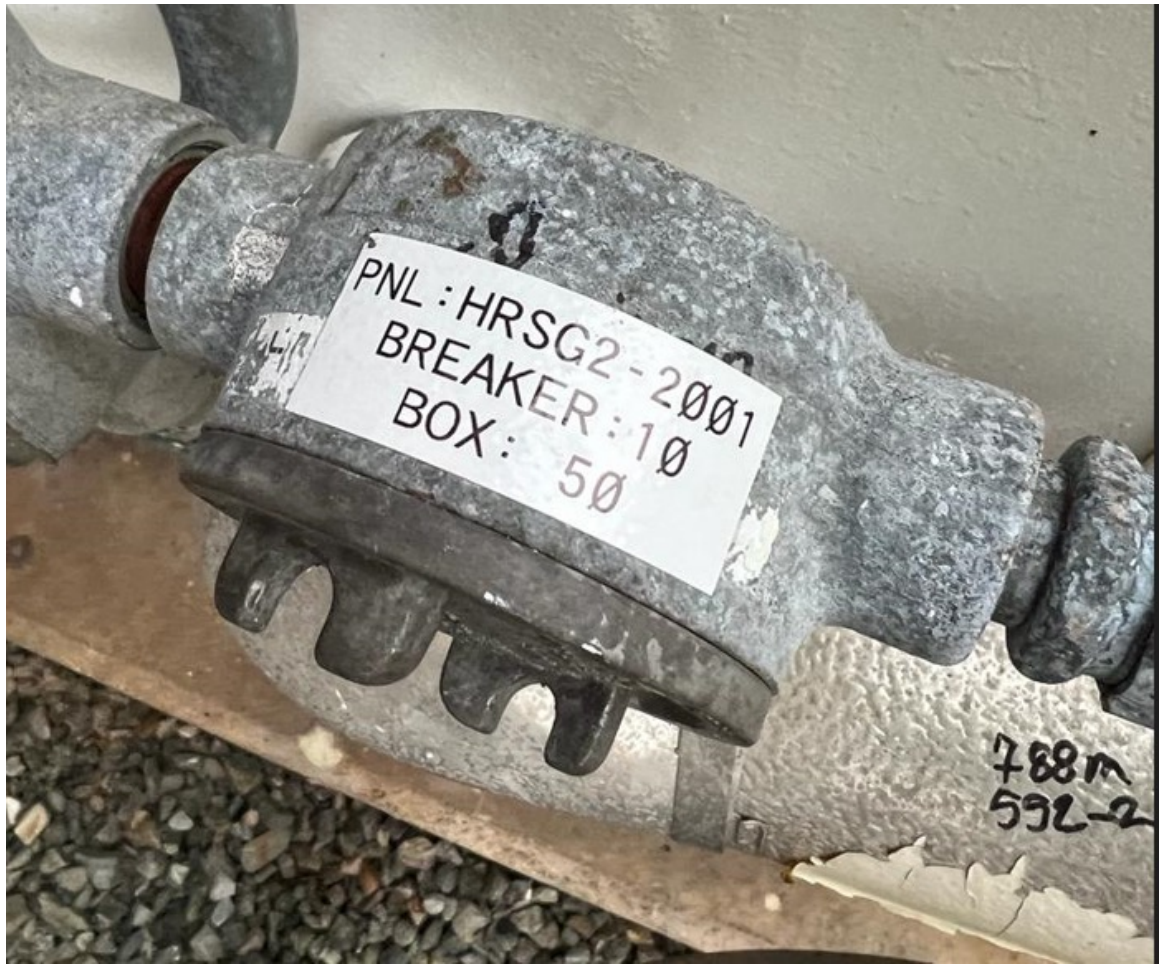
Panel Number	Breaker Number	Line Number	DTS Tag Number	Line Ohms	Line Megohms	Comments	Power Distribution	Heat Trace	Insulation	Scaffold
99BS-30	#22	1B-1	8796	2,900.00	11,000.00	80' of TB has failed. Located in the cooling tower area in the north corner by the HRSG and STG buildings. Recommend replace with comparable 80' TB rated for higher temp to alleviate failures. Scaffold is required.		$7,737.10	$300	$4,579.90
99BS-30	#22	1-2A	5745	1,721.00	158.9	84 of TB has failed. Located in the north corner of cooling tower area next to the oxygen cylinders and closed cooling water pipe. Recommend replace with higher rated temp TB to alleviate failures. Scaffold or scissor lift is required.		$7,737.10	$300	$3,508.90
99BS-30	#12	2230	8782	28.1	2	40' of SR cable has failed. Traces a vent pipe. Located north of cooling tower, upper mez deck next to stairs. Recommend replace with comparable 40' SR cable rated for 5w/ft. at 208V		$3,585.29	$2,020.00	
99BS-30	#19	3209	8781	22,000.00	3.2	20' of MI cable has failed. Traces a 10" 2" air valve pipe. Located north of cooling, top mez deck next to building and blow down tank. Approximate elevation 4'. Recommend replace with comparable 20' MI cable rated for 197 total watts.		$3,827	$1,499	
99BS-30	#22	1A-1	8797	3,800.00	11,000.00	80' of TB has failed. Located on the north corner of the cooling tower area close to the GRSG and STG buildings. Recommend replace with comparable 80' TB rated for a higher temp to alleviate failures. Scaffold is required.		$7,737.10	$300	$3,208.20
99BS-20	#21	117-4A	8778	1,297.00	11,000.00	60' of TB has failed. Located at OB box between Unit 5 & 6 BD tank, 30' in front of PNL20. Approximate elevation ground level. Recommend replace with comparable TB rated for higher temp to alleviate failures. A frame ladder is required.		$5,609.78	$300	
99BS-20	#12	150-4	8782	28.1	2	70' of SR cable has failed. Traces a vent pipe. Located north of cooling tower near stairs. Recommend replace with comparable SR cable rated for 5w/ft. at 208V of power.		$3,581.93	$3,217	
99BS-20	#17	117-3	8800	11.88	0.6	175' of SR cable has failed. Located in the cooling tower area, on Unit 6 skid on the NW side in front of the condensate tank. Approximate elevation 6'. Recommend replace with comparable SR cable rated for 5w/ft. at 120V of power. Scaffold is required.		$5,448.91	$11,181	$4,105.40
99BS-20	#13	N/A	8780	195.5	3,500.00	30' of SR cable has failed. Traces a pipe located on Unit 6 condensate tank, up underneath the cooling towers. Recommend replace with comparable SR cable rated for 5w/ft. at 120V of power.		$3,420.59	$1,326	

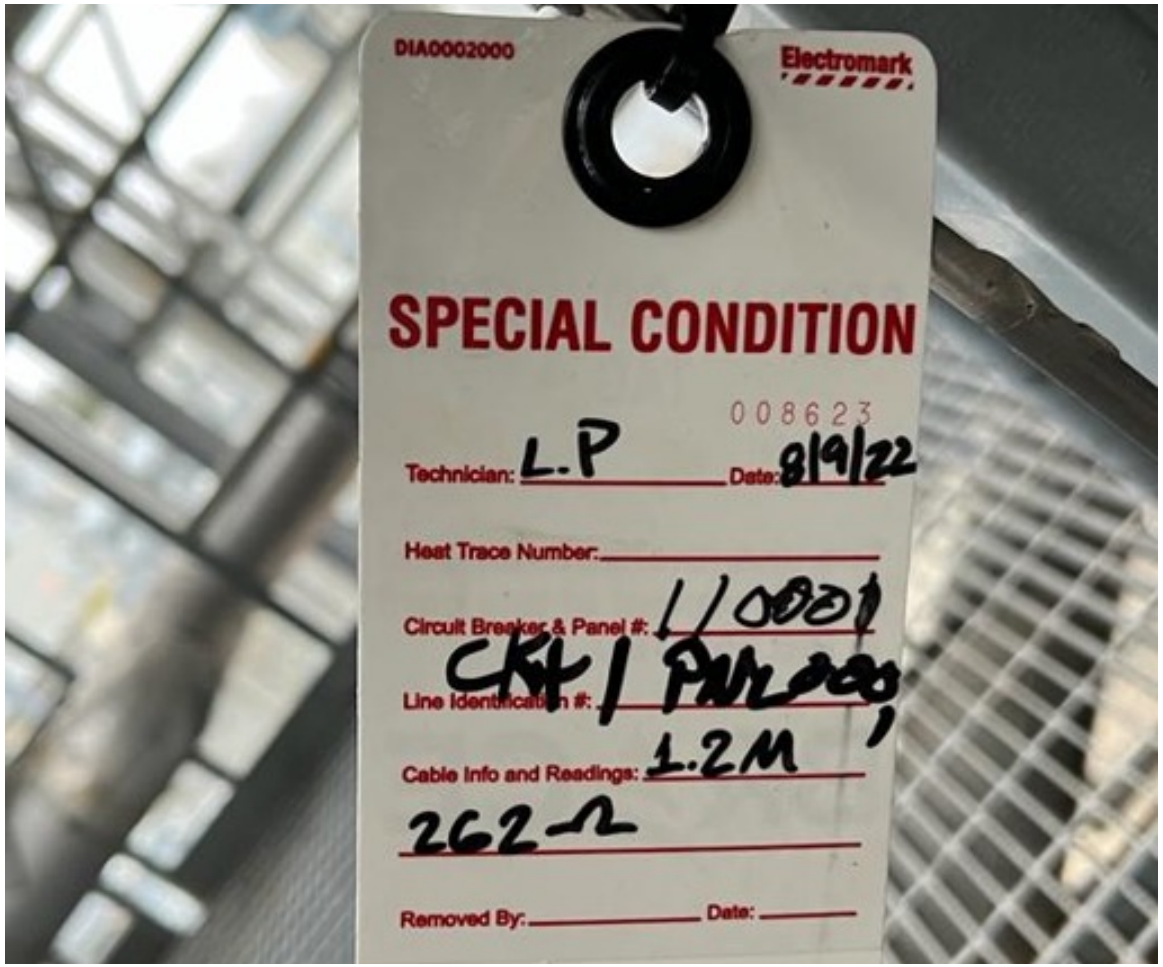
Generated 9/19/2022

51

Diamond Thermal Systems, A BrandSafway LLC Business | www.diamondthermalsystems.com

Work Left Behind





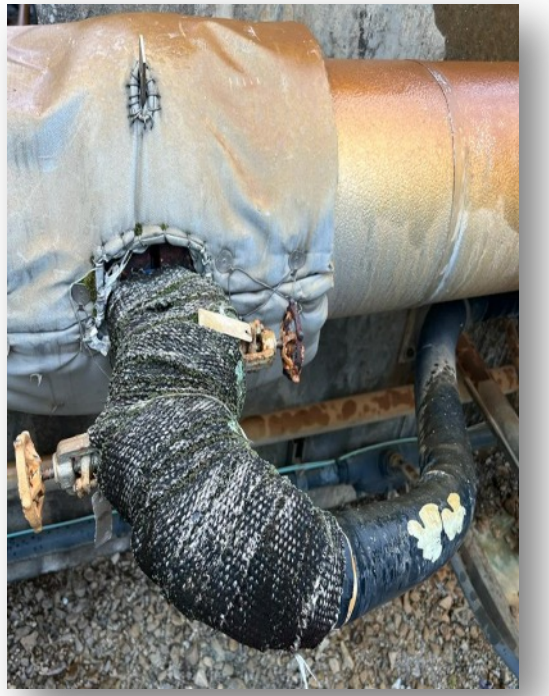
Audit History – why us, why now?

Heat Trace Audit by the Numbers….

- Over 100+ heat trace audits completed since 2019
- Seen trends in typical heat trace failure
- Developed know OEM Deficiencies in heat trace
- Communicate known trouble area and systems
- Categories heat trace by systems by boiler type and design
- Collection of Best practices
- Calculate/Model heat trace designs based on different variables
- Continue to accumulate audits and become more familiar with the data and failure modes

Common Field Observations

Insulation Deficiencies



Instrumentation root valve Insulation

Insulation Root Valve Solution

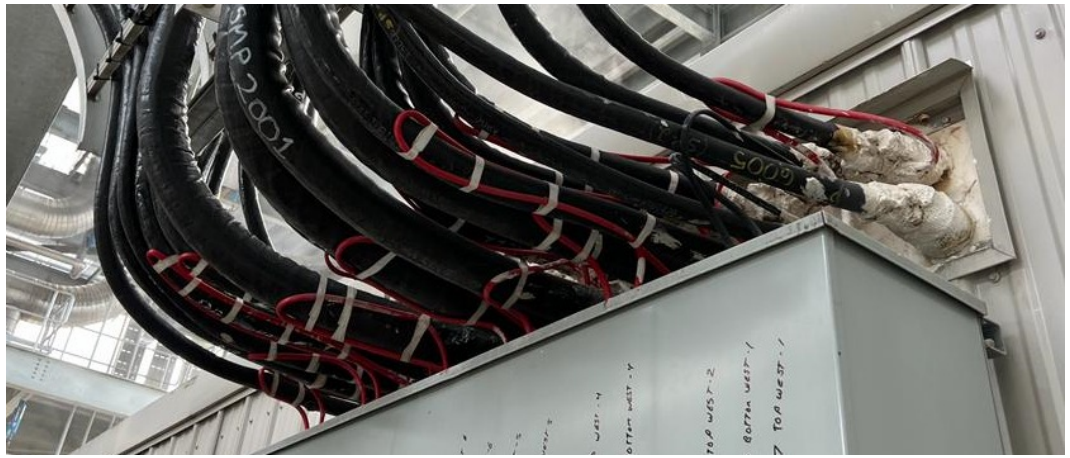
High Temp Root Valves

High Temperature Root Valve Solution

Instrument bundle Power Output

Undersized Heaters in Enclosures

Damaged Sample Bundle



Color Coded Sample Bundles

Field Execution

BrandSafway Customer Value Model

Jobsite management synergies utilizing BrandSafway branch networks

Overhead Consolidation

- Eliminate role duplication
- Consolidate site management

Multi-Service / Multi-Craft

- Eliminate craft support role duplication
- Consolidate project management

Multi-Site Consolidation

- Share staff costs across multiple sites
- Leverage broader capabilities when needed
- Shared administration

Program Scopes

- Opportunity to capture several or all synergy opportunities

Multi-Service Staff Example

Access	Heat Trace	Insulation	Coatings
~~PM~~	PM	~~PM~~	~~PM~~
~~Safety~~	~~Safety~~	Safety	~~Safety~~
Planner	~~Planner~~	~~Planner~~	Planner
~~Admin~~	Admin	Admin	~~Admin~~

Over 60% Reduction Opportunity

Multi-Site Opportunities

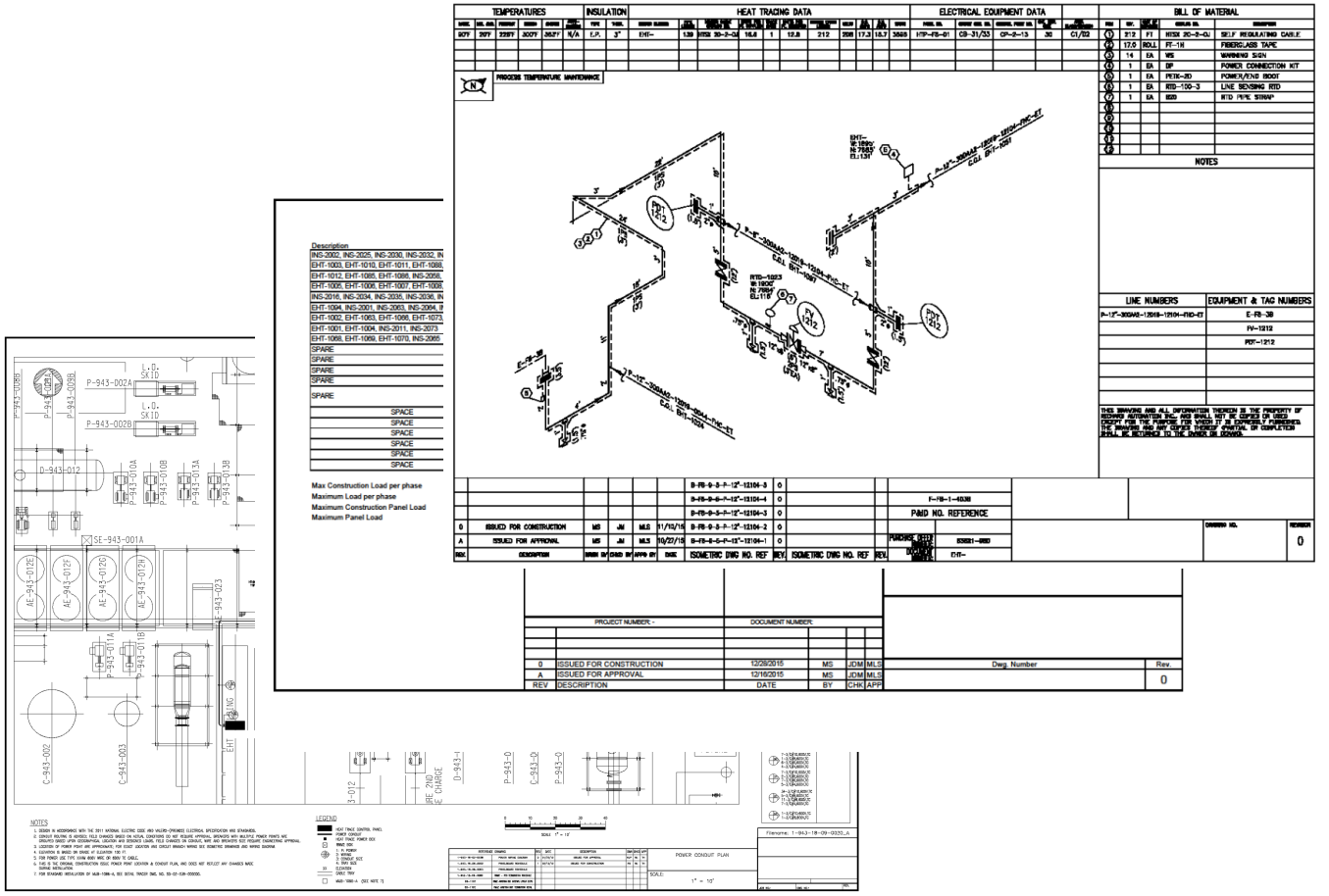
Staff and Resource Sharing

<u>Complete</u> suite of turnkey services allows <u>the best solutions</u> … backed by <u>proven</u> tools for Safe, Quality & Productive execution

Engineering Services

Customized for the regional climate and construction practices…

- Budgetary Estimates/Preparation
- Preliminary Design Review
- Specification Improvement/Review
- Technology/Feasibility Studies
- Design Optimization Review
- Detailed Engineering
  - EHT Design Database
  - EHT ISO-Metric Drawings
  - Power Point Locations
  - Power Cable Schedules
  - As-Built Documentation



Heat Trace design defines the pre-installation plan for a complete heat trace system

Field Services - MI Cable Welds

- Depending on the length of the heat trace cable and the quality of the overall cable, our technicians can identify where a potential break in an MI Cable is and perform weld repair an MI cable by sawdering the buss wires together.
- Although this might be an affordable option the success of the repair is based on how old the cable is. Heat trace has a shelf life.
- Our weld technicians have over 20 years experience

ATCOM Control Panels

…designed and built in the USA

Features	ATCOM A-Series	Competitor A-Series
Power Distribution	✓	✓
GFEP Tripping	✓	✓
Circuit Count (up to 48)	✓	✓
16” Touchscreen Display	✓	
Display 12 – Circuit per Screen	✓	
Through-Door Disconnect	✓	
HOA Switch	✓	✓
Monitoring, alarming/Control	✓	✓
RTD Map Screen	✓	
4 RTD per Circuit	✓	
Remote Access	✓	✓
DCS Data Delivery	✓	✓
UL Listed for C1D2 Access	✓	✓
Operator Manual	> 50 Pages	< 50 Pages
3 Year Full Warranty	✓	
Factory Lead Time	4-6 weeks	12+ weeks

The ATCOM panel is an independent control system for heat-trace applications, interchangeable between freeze-protection and process-maintain. Functionalities include Power Distribution, Sensor Monitoring, Alarming, Fail-Safe Protection, and Data Delivery.

Design: The panel is PLC based, controlling up to 48 circuits at 120-480V. An industrial 16” touchscreen allows users to select between three control methods: Line-Temperature based, Ambient based, or Manual. Up to 4 field RTDs can be assigned to each circuit, providing a thorough overview of the application status.

Alarm & Setpoints: Alarms are generated for circuit temperature, current, and ground fault leakage. Users can modify setpoints and other data with the touchscreen. Project-specific setpoints are preassigned tc each panel, for turn-key convenience.

Software: Remote-Access software is provided with each panel, allowing users to access the panel directly from their computer. Communications with the plant DCS is also available for full data delivery.

Maintenance: Modular design allows for straightforward equipment replacement. The panel’s Non-congested layout & wiring helps with installation & troubleshooting

UL 508A Listed
Ordinary & Hazardous Area
Designed & Assembled in the USA

ATCOM panels were designed with ease of maintenance in mind

Special Offer

Special Offer

- **Repair Discount**
- Apply **20%** cost of audits towards repair work for all NAES sites that perform repair work in 2023.
- Apply **30%** cost of audits toward repair work performed in 2023 for the first 3 plants that sign on an audit.

- **Rebate Structure for NAES Preferred Vendor Program**

Annual Volume		Rebate Rate	Rebate $$	Cumulative Rebate $$
$0.00	3,000,000	.25%	$7,500	$7,500
3,000,001	4,000,000	.50%	$5,000	$12,500
4,000,001	5,000,000	.75%	$7,500	$20,000
5,000,001	6,000,000	1.00%	$10,000	$30,000
>6,000,001		1.25%		

Technical Audit Offer

- Dedicated Audit Teams to NAES Plants
- Available Capacity
- Consistency in Audit Deliverables
- Reduce Travel Cost
  - Scheduling and optimizing site audits by regions
- Potential to standardization of heat trace systems
- Data Optimization for Analysis
- Agreed MSA in place

THANK YOU