

THE PORT AUTHORITY OF NY & NJ

FOI Administrator

March 28, 2016

Mr. Jonathan M. Preziosi
Pepper Hamilton LLP
301 Carnegie Center, Suite 400
Princeton, NJ 08543-5276

Re: Freedom of Information Reference No. 14831

Dear Mr. Preziosi:

This is in furtherance of your renewed appeal letter of January 14, 2016 letter in connection with Freedom of Information request #14831.

Upon review, the remaining materials responsive to your appeal with regard to "Exemption Log for Disclosure Two," dated March 16, 2015 are being made available and can be found on the Port Authority's website at <http://corpinfo.panynj.gov/documents/14831-O-A2>. Paper copies of the available records are available upon request.

As the Port Authority has provided all of the documents in its possession responsive to your appeal with regard to Exemption Log for Disclosure Two, we request that the Demand for Arbitration filed with JAMS on this matter be withdrawn.

Please refer to the above FOI reference number in any future correspondence relating to your request.

Very truly yours,



Danny Ng
FOI Administrator

Enclosure

*4 World Trade Center, 18th Floor
150 Greenwich Street
New York, NY 10007
T: 212 435 3642 F: 212 435 7555*

Leonardo, Raul

From: Wallace, Michael
Sent: Friday, September 17, 2010 10:28 AM
To: Lochard, Daniel; Leonardo, Raul
Subject: FW: Bus bar

fyi

From: Huda, Syed
Sent: Friday, September 17, 2010 9:08 AM
To: Wallace, Michael
Subject: RE: Bus bar

No comments.

From: Wallace, Michael
Sent: Thursday, September 16, 2010 10:27 AM
To: Lochard, Daniel; Leonardo, Raul; Ret, Herman; Huda, Syed; LaMarca, Thomas
Cc: Haines, Dawn; Simeonidis, Nicholas; Johnson, Caesar; Radics, Frank; McKeon, Sarah
Subject: FW: Bus bar

Gents,

Please review and provide any additional comments.

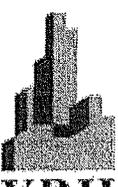
Dawn – We need to eventually memorialize all of the correspondences and responses into a complete package for the files and the Facility – I have all of the emails if you are missing any – see me to discuss.

Mike

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Monday, September 13, 2010 12:06 PM
To: Wallace, Michael
Subject: FW: Bus bar

Mike

Forwarding a response on Item numbers 7,9,11 and 15 to your 9/7/10 correspondence.

 **Jeffrey Konen**
Vice President
 320 Grand Ave.
 Englewood, NJ 07631
 Phone: 201-871-4422
 Fax: 201-871-6727 Mobile: 201-259-4685
 www.vrhcorp.com

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From: Don Sapanara [mailto:don.sapanara@smelectric.com]
Sent: Monday, September 13, 2010 8:17 AM

To: Konen, Jeff
Cc: Winkler, Eric; Al Fosbenner
Subject: RE: Bus bar

Jeff,

In response to Mike Wallace's questions below:

Item 7:

This response came from Harry Josten of Siemens:
"The industry including Siemens and our competitors have been using galvanized steel for bus braces, supports, etc. in contact with silver or tin plated bus for decades.

Carbon steel is used because it is inexpensive, strong, tough, and easy to fabricate. It must be coated to prevent corrosion. We prefer to use galvanized steel (zinc coated) because zinc provides superior corrosion protection to the steel than does paint. It also visually differentiates "live" steel parts from grounded steel parts used for the enclosure.

Stainless steel such as alloy 304 has also be used in place of carbon steel. This is usually done to reduce hysteresis loss where inductive heating of steel parts is a problem. We don't have a problem with inductive heating and pass all of our ANSI temperature tests with the carbon steel parts as supplied. Stainless steel also cost several times more per pound than carbon steel and is harder to fabricate. Tools designed to form low carbon steel parts may break or not form stainless properly due to the different material characteristics. Punches may also break trying to punch the harder stainless material.

Reinforced plastics are also much more expensive than low carbon steel and do not have nearly the mechanical strength. Fabrication is also more difficult and costly."

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"I haven't requested that INBU do a DLRO test and to the best of my knowledge they aren't planning on doing one. They should be able to do it but you will need to get them to quote an adder for the additional work."

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"Attached is a copy of the Fort Worth breaker certified test report that shows what tests they run and how the information will be displayed. We planned on providing a copy of the test reports for the breakers that are returned for testing.

I'm also including a copy of the ANSI C37.50 standard that provides details on what breaker production tests are required."

Item 15 – Warranty:

The warranty for each lineup will take effect after Item 14 – Thermographic Testing has been completed. The thermographic testing will be performed after the equipment has been energized and is in service, so we are testing under actual load conditions.

If Port Authority or VRH have any further questions, please do not hesitate to contact us.

Thanks,

Don Sapanara

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Tuesday, September 07, 2010 1:53 PM
To: Al Fosbenner; Don Sapanara
Cc: Winkler, Eric
Subject: FW: Bus bar

Al/Don

See the following release from the Port on the Bus Bar recertification.
 I agree that the additional comments are minor.

The ball is in your court, For our meeting this Friday at 10:00 am, please prepare a schedule to perform the work and testing associated with the recertification process and your schedule for the installation of the remaining switchgear and switchboards to include proposed dates for required shutdowns.
 We will review this in detail on Friday.

We will then have a follow up meeting with the Port to present our schedule and confirm the requested shutdowns.

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Jeff,

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- Warranty should begin when equipment is placed into service not before.

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Michael C. Wallace, P.E. LEED AP

Senior Resident Engineer
 Newark Liberty International Airport - CTA
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 (973) 390-5519 Cell
 E-mail: mcwallac@panynj.gov

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
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Subject: FW: Bus bar
Attachments: WLCertTestReport.pdf; ANSI C37.50 LVPB Production Tests.doc

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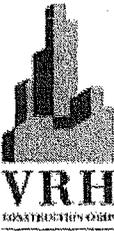
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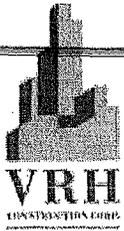
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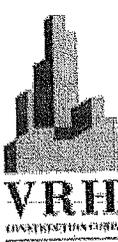
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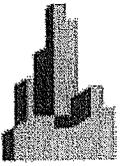
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Leonardo, Raul

From: Ret, Herman
Sent: Wednesday, September 01, 2010 2:56 PM
To: Wallace, Michael; Lochard, Daniel; Huda, Syed
Cc: Heitmann, James; Radics, Frank; LaMarca, Thomas; Leonardo, Raul; McConkey, John; Roytman, Leonid; McKeon, Sarah; Simeonidis, Nicholas; Johnson, Caesar; Hegarty, Brian; Berty, Sherry; Hogan, Kevin; Leggett, Gregg; Sienkiewicz, Stanley
Subject: RE: EWR 264.003 - Discoloration of Busbar - Resolution

Mike

I looked this over and have several comments:

Cleaning and Re-plating

- They make no mention of the training by the manufacturer as previously discussed.

Item 5

- As previously discussed if one joint is found to be unacceptable then all the joints should be inspected.

Item 7

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Item 9

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Item 15 – Warranty

- Warranty should begin when equipment is placed into service not before.

I am wondering as a final test once the switch board is energized and before the load are transferred if we should put a load on the equipment and give it a once over with a Thermo scan?

From: Wallace, Michael
Sent: Wednesday, September 01, 2010 7:14 AM
To: Lochard, Daniel; Ret, Herman; Huda, Syed
Cc: Heitmann, James; Radics, Frank; LaMarca, Thomas; Leonardo, Raul; McConkey, John; Roytman, Leonid; McKeon, Sarah; Simeonidis, Nicholas; Johnson, Caesar; Hegarty, Brian; Berty, Sherry; Hogan, Kevin; Leggett, Gregg; Sienkiewicz, Stanley
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Attached please find a letter from VRH with corresponding supporting documents from Siemens regarding the Inspection and Recertification Procedure for SWGR SA, SB, NB and EMDS (North).

From our previous meeting, the only change is that a 4 year warranty has been offered – prior to receipt of this letter, I did confirm with Jim Heitmann that this was acceptable to the Facility.

Dan/Herman/Syed – Please review the document and advise of any comments.

I believe at this time that the PA has received an equitable solution to this problem and by Wednesday, September 8th, I plan on accepting this plan and directing VRH to proceed to get LLE's electrical work back on track. I will incorporate any of your comments into this directive.

Mike

<< File: VRH Letter - Remediation of Busbar - 08-26-2010.pdf >>

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Subject: RE: EWR 264.003 - Discoloration of Busbar - Resolution

Mike,
 Siemens offer looks reasonable to engineering design. However, we request you to ask Siemens to clarify the item #11 in their letter to indicate the name of the tests to be performed on returned circuit breakers for recertification. Are they same as the series of tests outlined in **ANSI C37.50-1989, Table 1-Test Sequence I**? Also, Siemens should made available to the Authority a copy of the test report for the tests performed on the returned breakers.

Syed

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VRH Letter -
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Subject: EWR 264.003 - LLE - Busbar - Letter to VRH



Letter MW to JK
8-9-201- busba...

**THE PORT AUTHORITY OF NY & NJ**

August 9, 2010

VRH Construction Corp.
320 Grand Avenue
Englewood, NJ 07631

Attention: Mr. Jeffrey Konen

**SUBJECT: NEWARK LIBERTY INTERNATIONAL AIRPORT
EWR-264.003 – TERMINAL B MODERNIZATION PROGRAM
LOWER LEVEL EXPANSION & B1 VERTICAL CIRCULATION**

Reference: VRH letter to PANYNJ, dated 7/29/10

Dear Mr. Konen:

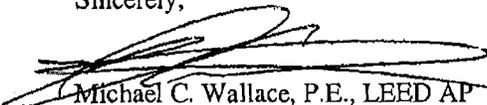
We are in receipt of your letter regarding the clarifications to the recertification of the Low Voltage Switchgears SA, SB, NB and EMDS-1 (North Generator).

Many of the Port Authority's concerns have been addressed in your response, but the following items listed below must be agreed to in order for the PA to fully accept and allow the recertification to commence:

1. Submit a fully inclusive certification process, which incorporates all correspondences to date to the Resident Engineer for final review. The certification process is defined as all inspections and test procedures proposed by Siemens, SM Electric, VRH and the Port Authority. The reference correspondences are as follows:
 - a. Siemens' Letter dated June 30, 2010
 - b. VRH Letter, J. Konen to M. Wallace, dated July 29, 2010
 - c. This correspondence
2. In the absence of a definitive conclusion to the busbar discoloration/corrosion and an explanation to what environmental factors the equipment may have been exposed to, the PA is requiring a five (5) year warranty from the in-service date with thermographic testing performed in accordance with NETA standards at the following intervals: 6 mo., 1, 2, 3, 4 and 5th year. The thermographic testing must be performed by a certified, independent, third party testing agency.
3. All devices designated for destructive testing and/or shipment back to the factory will be chosen in the field by PA Resident Engineer.
4. All destructive testing will be performed at Newark Airport in the witness of a PA representative.
5. The galvanized connections to the uncoated busbar sections have yet to be addressed. A corrective action to this issue must be received or all galvanized connections removed and replaced.
6. Any sections of busbar that were burnished or sanded in an attempt to remove the discoloration must be replaced.

Please forward your concurrence and all pertaining documentation so that work can commence.

Sincerely,


Michael C. Wallace, P.E., LEED AP
Senior Resident Engineer
Central Terminal Area, EWR

Building #125, Central Terminal Area
Newark, NJ 07114
T: 973 622 0800

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Sent: Sunday, August 01, 2010 9:31 AM
To: Wallace, Michael; Heitmann, James; Radics, Frank
Cc: Simeonidis, Nicholas; Leonardo, Raul; Lochard, Daniel; Johnson, Caesar; Hegarty, Brian; McConkey, John; LaMarca, Thomas; Huda, Syed; Roytman, Leonid; McKeon, Sarah
Subject: RE: EWR 264.003 - Bus Bar Discoloration

I have the following Comments;

Mike's Comments;

I agree with the 3 year warranty on equipment and the 5 year on the bus bar, but we need to include some type of re-inspection process and a way to determine if the installation is deteriorating absent of a failure.

As far as disassembling being performed on site can they provide the same level of quality control as the work being performed in the factory?

VRH Letter;

- 1 I think if one joint is discovered to be bad all the joints should be inspected.
 - 2 The bus plating protects the bus from corroding. Absent the plating we are not getting what we paid for.
 - 3 If numerous problems were to be detected with either the inspection or testing at what point would be require all the equipment to be done?
- 2 We should have detailed inspection and testing procedure now prior to making a determination as to whether we are excepting this proposal.

As part of John McConkey May 21, response he recommended Full thermographic inspection be performed six months after switch gear is placed in service. This should be included .

Herman

From: Wallace, Michael
Sent: Thursday, July 29, 2010 12:13 PM
To: Heitmann, James; Radics, Frank; Ret, Herman
Cc: Simeonidis, Nicholas; Leonardo, Raul; Lochard, Daniel; Johnson, Caesar; Hegarty, Brian; McConkey, John; LaMarca, Thomas; Huda, Syed; Roytman, Leonid; McKeon, Sarah
Subject: EWR 264.003 - Bus Bar Discoloration

A meeting was held yesterday with the following in attendance:

M. Wallace, R. Leonardo, D. Lochard – PA CMD
H. Ret, N. Simeonidis – PA EWR Facility
J. Konen, E. Winkler – VRH
D. Sapanara, R. Elliot – SM Electric.
B. Powell, H. Josten, D. Schornstein – Siemens (via teleconference)

This meeting was held at the request of VRH to review the specific items highlighted in the 7/23/2010 letter, M. Wallace to J. Konen prior to providing the PA with an official response and a proposed remediation plan.

The official response from VRH is attached for the Facility's review and comment. << File: Busbar.pdf >>

The Resident Engineer's Office recommends acceptance of this latest remediation plan from VRH, SM & Siemens with the following stipulations added:

- PA would require a 3 year warranty instead of 2 and a separate 5 year warranty on the busbar itself since recoating of the entire busbar will not be performed per Contract Specifications.
- The recertification process must also address the galvanized bracing/connections and address any required coating to prevent further corrosion.
- ~~The disassembling (destructive testing) of at least one trip unit and one molded case breaker will be performed in the field in the presence of the PA. Similarly, at least one WL breaker will be disassembled and re-assembled on site in addition to the ones being shipped offsite. **Do we want all disassembling to be done on site?**~~
- The recertification process will be fully witnessed by PA representatives (CMD/PA Electrical staff)
- This recertification process includes SA, SB, NB and the North Generator SWGear (EMDS-North).

I will put a meeting on the calendar for early next week to finalize the PA's position.

Thanks.

Mike

Leonardo, Raul

From: Wallace, Michael
Sent: Thursday, July 29, 2010 12:13 PM
To: Heitmann, James; Radics, Frank; Ret, Herman
Cc: Simeonidis, Nicholas; Leonardo, Raul; Lochard, Daniel; Johnson, Caesar; Hegarty, Brian; McConkey, John; LaMarca, Thomas; Huda, Syed; Roytman, Leonid; McKeon, Sarah
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I will put a meeting on the calendar for early next week to finalize the PA's position.

Thanks.

Mike



July 29, 2010

Mr. Michael C. Wallace, P.E.
 The Port Authority of NY & NJ
 Newark Liberty International Airport
 Building 74, CTA
 Newark, NJ 07114

Re: EWR264.003
 Terminal B Modernization Program
 Lower Level Expansion & B1 Vertical Circulation
 VRH 2034

Building trust

for 50 years.

1958-2008

Dear Mr. Wallace,

The following response is provided to the questions raised in your 7/23/10 correspondence regarding the proposed recertification to the Siemens switchgear.

Repair to Discolored Busbar

1. As part of the recertification process in each vertical section Siemens will visually inspect at least four bolted joint contact surfaces by disassembling the Joint to ensure that the silver plating is still intact. The inspection will include both the cable and bus compartments.

Preliminary inspections performed to date have confirmed that the silver plating remains intact. In the event that the plating is not fully intact at any bolted connection, remedial repair to restore the silver plating will be performed.

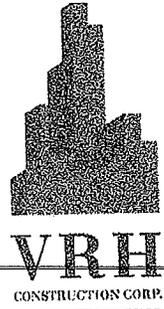
2. As confirmed by Barry Powell of Siemens in our 7/28/10 conference call; "The loss of silver outside the electrical joints will not reduce the current carrying capacity or negatively impact the temperature rise of the bus bars in service and will not reduce the effective service life of the equipment.

3. During the recertification process, any components or equipment found to be compromised by corrosion or other means will be refurbished or replaced.

4. A representative from the silver plating manufacturer will train and certify S. M. Electric personnel for the installation of the field applied silver plating. Siemens will inspect the application as part of the recertification process. Written confirmation of training will be provided.

320 Grand Avenue
 Englewood, NJ
 07631-4855

Phone
 201.871.4422
 Fax/Executive
 201.871.6727
 Fax/Accounting
 201.871.1927
 Fax/Estimating
 201.871.0705



July 29, 2010

Mr. Michael C. Wallace, P.E.
Page 2

Electrical Components

1. All electronic trip units will be visually inspected as part of the recertification process.

In addition, one unit from each line up (total of four units) will be disassembled for complete internal analysis.

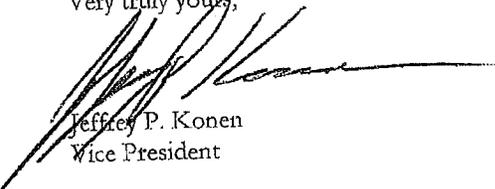
2. One WL circuit breaker from each line up (total of 4 breakers) will be shipped offsite for bench testing above and beyond field inspection. One molded case breaker from switchboards B1 and B2 will be shipped offsite for bench testing above and beyond field inspection.

Prior to commencement of the recertification process, Siemens will prepare a report to outline the inspection and testing procedures to be performed as part of the recertification. This report will be transmitted via separate cover.

Siemens will furnish a final recertification report and documentation stating that the equipment is certified as new consistent with new, switchgear being shipped from the factory.

Siemens will provide a warranty for the equipment for a period of two (2) years from the in service date.

Very truly yours,



Jeffrey P. Konen
Vice President

JPK:vmd

Leonardo, Raul

From: Wallace, Michael
Sent: Monday, July 26, 2010 1:25 PM
To: Ret, Herman; Heitmann, James; Radics, Frank; Simeonidis, Nicholas; Johnson, Caesar; McConkey, John; Huda, Syed; McKeon, Sarah; Roytman, Leonid; LaMarca, Thomas
Cc: Hegarty, Brian; Leonardo, Raul
Subject: EWR 264.003 - Busbar Discoloration

Attached please find the letter sent back to VRH for the latest submission from Siemens.

I received comments from Herman and my staff that are reflected in the response.



Letter MW to JK
BUSBAR .pdf

As soon as I hear from VRH, I will set up a meeting to hopefully come to a final resolution.

Mike

**THE PORT AUTHORITY OF NY & NJ**

July 23, 2010

VRH Construction Corp.
320 Grand Avenue
Englewood, NJ 07631

Attention: Mr. Jeffrey Konen

**SUBJECT: NEWARK LIBERTY INTERNATIONAL AIRPORT
EWR-264.003 – TERMINAL B MODERNIZATION PROGRAM
LOWER LEVEL EXPANSION & B1 VERTICAL CIRCULATION**

Reference: Siemens letter to PANYNJ, dated 6/30/10

Dear Mr. Konen:

We are in receipt of the Siemens's letter forwarded by VRH that reviews and provides recommendations for recertification of the Low Voltage Switchgears SA, SB and NB.

The Port Authority acknowledges that this issue is finally being given the proper priority and attention; however, several questions have arisen that need to be reviewed in order for a final determination to be provided. They are as follows:

Repair to Discolored Busbar

1. Pg 2 - How will the bus be cleaned between the stacked bus bars? How will it be verified?
2. Pg 2 – Under Recommended Steps, the installation of brushed on electroplate on the exposed electrical connection points does not fully address the remaining bus that was to be plated in accordance with PA Specifications.
3. Pg 2 - what is the procedure if evidence of corrosion is found on any of the equipment identified in (1) through (6)?
4. The installation of this brush-on plating must be done by a certified entity, approved by the manufacturer, Siemens. Written confirmation of this approval would be required.

Electrical Components

1. There is no mention of inspection for the electronic trip units and/or replacement if corrosion or damage is found.
2. Item #5 on page 3 states "Return one circuit breaker from each lineup." It needs to be changed to "Return one WL circuit breaker and one molded case circuit breaker from each switchgear and switchboard."

Building #125, Central Terminal Area
Newark, NJ 07114
T: 973 622 0800



Cont'd
Mr. Jeffrey Konen

Page 2

~~In addition to the above, this latest letter does not fully address or determine what was the root cause of the initial busbar discoloration. Without a definitive response, statements regarding the service life of the equipment are questionable and would have to be backed by a warranty of better than the suggested one year for the Port Authority's consideration.~~

Furthermore, any future response regarding this issue needs to come from VRH, with supporting documentation from SM Electric and Siemens. The PA has a Contract with VRH and we expect our general contractor to outline and captain all efforts necessary to put this issue to rest. The Resident Engineer's Office and Facility staffs are available to meet with you at the earliest convenience if necessary to discuss the aforementioned concerns and reach a viable resolution.

Sincerely,



Michael C. Wallace, P.E., LEED AP
Senior Resident Engineer
Central Terminal Area, EWR

Leonardo, Raul

From: Wallace, Michael
Sent: Thursday, May 06, 2010 3:09 PM
To: McConkey, John; Roytman, Leonid
Cc: Simeonidis, Nicholas; Leonardo, Raul; Berty, Sherry; Lochard, Daniel; Hegarty, Brian; Prince, Roger
Subject: EWR 264.003 - Discoloration of the BusBar (Large File due to attachments)

John,

As per our discussion, I am attaching all information and correspondences that we have to date on this issue and are asking for Engineering Design to review and provide any recommendation on how to mitigate/resolve this issue with the manufacturer, Siemens.



2010042910582262
5.pdf

This is SM Electric response to RE Letter



DOC100506-001.pdf
f

RE Letter to GC



DOC100420-001.pdf
f

Lucius Pitkin Report



DOC100406.pdf

Siemen's SwitchGear Cut Sheet



Newark Airport-Bus
discolorati...

Siemen's Response to Discoloration Issue



IMG_0080.jpg



IMG_0086.jpg

Pictures of Discolored Buss

As we discussed, my staff can facilitate a site inspection whenever your staff is available. Raul Leonardo is the ARE for the project and the electrical inspectors are Dan Lochard and Sherry Berty.

Thanks again and call me if you require any additional information.

Michael C. Wallace, P.E. LEED AP

Senior Resident Engineer
Newark Liberty International Airport - CTA
(973) 622-0800 x 251 (Building 125)
(973) 622-0172 FAX
(973) 390-5519 Cell
E-mail: mcwallac@panynj.gov

Lochard, Daniel

From: Leonardo, Raul
Sent: Thursday, September 16, 2010 8:41 AM
To: Lochard, Daniel
Subject: FW: EWR 264.003 - Discoloration of Busbar - Resolution

From: Wallace, Michael
Sent: Wednesday, September 01, 2010 7:14 AM
To: Lochard, Daniel; Ret, Herman; Huda, Syed
Cc: Heitmann, James; Radics, Frank; LaMarca, Thomas; Leonardo, Raul; McConkey, John; Roytman, Leonid; McKeon, Sarah; Simeonidis, Nicholas; Johnson, Caesar; Hegarty, Brian; Berty, Sherry; Hogan, Kevin; Leggett, Gregg; Sienkiewicz, Stanley
Subject: EWR 264.003 - Discoloration of Busbar - Resolution

Attached please find a letter from VRH with corresponding supporting documents from Siemens regarding the Inspection and Recertification Procedure for SWGR SA, SB, NB and EMDS (North).

From our previous meeting, the only change is that a 4 year warranty has been offered – prior to receipt of this letter, I did confirm with Jim Heitmann that this was acceptable to the Facility.

Dan/Herman/Syed – Please review the document and advise of any comments.

I believe at this time that the PA has received an equitable solution to this problem and by Wednesday, September 8th, I plan on accepting this plan and directing VRH to proceed to get LLE's electrical work back on track. I will incorporate any of your comments into this directive.

Mike



VRH Letter -
Remediation of Bu..

Lochard, Daniel

From: Lochard, Daniel
Sent: Tuesday, July 19, 2011 3:36 PM
To: Nunez, Daniel
Subject: FW: Letter to VRH

Dan,

I placed the date of the last inspection.
But, I think that we should tell them what to do.
This nice approach has not worked well in the past because we will lose more if they continue to delay the inevitable.

Daniel

-----Original Message-----

From: Wallace, Michael
Sent: Tuesday, July 19, 2011 11:06 AM
To: Lochard, Daniel; Nunez, Daniel
Subject: Letter to VRH

Please be advised that during a Facility inspection today, it was noted that significant corrosion (green) has become evident on June 6, 2011. As you are aware, the acceptance of this equipment has been delayed due to other corrosion issues and the PA once again has serious concerns regarding the quality of the material provided. Furthermore, it is apparent that no preventative measures have been implemented by the Contractor to mitigate the onset of corrosion.

Please be advised that no shutdowns or acceptance of equipment will be scheduled until this issue is resolved to the Authority's satisfaction. Your prompt and immediate attention to this matter is warranted.

Michael C. Wallace, P.E. LEED AP
Senior Resident Engineer-EWR-CTA. ---
Sent from my BlackBerry Wireless Device

Lochard, Daniel

From: Wallace, Michael
Sent: Friday, September 17, 2010 10:28 AM
To: Lochard, Daniel; Leonardo, Raul
Subject: FW: Bus bar

fyi

From: Huda, Syed
Sent: Friday, September 17, 2010 9:08 AM
To: Wallace, Michael
Subject: RE: Bus bar

No comments.

From: Wallace, Michael
Sent: Thursday, September 16, 2010 10:27 AM
To: Lochard, Daniel; Leonardo, Raul; Ret, Herman; Huda, Syed; LaMarca, Thomas
Cc: Haines, Dawn; Simeonidis, Nicholas; Johnson, Caesar; Radics, Frank; McKeon, Sarah
Subject: FW: Bus bar

Gents,

Please review and provide any additional comments.

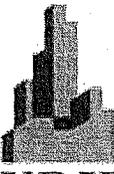
Dawn – We need to eventually memorialize all of the correspondences and responses into a complete package for the files and the Facility – I have all of the emails if you are missing any – see me to discuss.

Mike

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Monday, September 13, 2010 12:06 PM
To: Wallace, Michael
Subject: FW: Bus bar

Mike

Forwarding a response on Item numbers 7,9,11 and 15 to your 9/7/10 correspondence.

 **Jeffrey Konen**
Vice President

320 Grand Ave.
 Englewood, NJ 07631
 Phone: 201-871-4422
 Fax: 201-871-6727 Mobile: 201-259-4685
 www.vrhcorp.com

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From: Don Sapanara [mailto:don.sapanara@smelectric.com]
Sent: Monday, September 13, 2010 8:17 AM

To: Konen, Jeff
Cc: Winkler, Eric; Al Fosbenner
Subject: RE: Bus bar

Jeff,

In response to Mike Wallace's questions below:

Item 7:

This response came from Harry Josten of Siemens.

"The industry including Siemens and our competitors have been using galvanized steel for bus braces, supports, etc. in contact with silver or tin plated bus for decades.

Carbon steel is used because it is inexpensive, strong, tough, and easy to fabricate. It must be coated to prevent corrosion. We prefer to use galvanized steel (zinc coated) because zinc provides superior corrosion protection to the steel than does paint. It also visually differentiates "live" steel parts from grounded steel parts used for the enclosure.

Stainless steel such as alloy 304 has also be used in place of carbon steel. This is usually done to reduce hysteresis loss where inductive heating of steel parts is a problem. We don't have a problem with inductive heating and pass all of our ANSI temperature tests with the carbon steel parts as supplied. Stainless steel also cost several times more per pound than carbon steel and is harder to fabricate. Tools designed to form low carbon steel parts may break or not form stainless properly due to the different material characteristics. Punches may also break trying to punch the harder stainless material.

Reinforced plastics are also much more expensive than low carbon steel and do not have nearly the mechanical strength. Fabrication is also more difficult and costly."

Item 9:

This response came from Allan Worthy of Siemens. The need for a quote for adding the DLOR test will be handled between S.M. and Siemens.

"I haven't requested that INBU do a DLRO test and to the best of my knowledge they aren't planning on doing one. They should be able to do it but you will need to get them to quote an adder for the additional work."

Item 11:

This response came from Allan Worthy of Siemens. The documents are attached.

"Attached is a copy of the Fort Worth breaker certified test report that shows what tests they run and how the information will be displayed. We planned on providing a copy of the test reports for the breakers that are returned for testing.

I'm also including a copy of the ANSI C37.50 standard that provides details on what breaker production tests are required."

Item 15 – Warranty:

The warranty for each lineup will take effect after Item 14 – Thermographic Testing has been completed. The thermographic testing will be performed after the equipment has been energized and is in service, so we are testing under actual load conditions.

If Port Authority or VRH have any further questions, please do not hesitate to contact us.

Thanks,

Don Sapanara

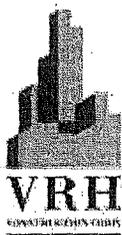
From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Tuesday, September 07, 2010 1:53 PM
To: Al Fosbenner; Don Sapanara
Cc: Winkler, Eric
Subject: FW: Bus bar

Al/Don

See the following release from the Port on the Bus Bar recertification.
 I agree that the additional comments are minor.

The ball is in your court, For our meeting this Friday at 10:00 am, please prepare a schedule to perform the work and testing associated with the recertification process and your schedule for the installation of the remaining switchgear and switchboards to include proposed dates for required shutdowns.
 We will review this in detail on Friday.

We will then have a follow up meeting with the Port to present our schedule and confirm the requested shutdowns.



Jeffrey Konen
Vice President

320 Grand Ave.
 Englewood, NJ 07631
 Phone: 201-871-4422
 Fax: 201-871-6727 Mobile: 201-259-4685
www.vrhcorp.com

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From: Wallace, Michael [mailto:mcwallac@panynj.gov]
Sent: Tuesday, September 07, 2010 1:25 PM
To: Konen, Jeff
Cc: Leonardo, Raul; Winkler, Eric; Lochard, Daniel
Subject: RE: Bus bar

Jeff,

As per our previous discussion, VRH is directed to proceed with the busbar re-certification process as outlined in your latest correspondence, dated 8-26-2010. This is an Approved as Noted with the following comments that need to be addressed and/or clarified but are deemed to be minor in nature:

Item 7

- We still do not have an understanding of the use of Galvanized components in contact with the bus bar – please clarify.

Item 9

- They should perform a DLOR test on all the bus joints. Preferable a minimum of 100 amps.

Item 11

- We need Siemens to indicate the name of the tests to be performed on returned circuit breakers for recertification. Are they same as the series of tests outlined in **ANSI C37.50-1989, Table 1-Test Sequence I?** Also, Siemens should make available to the Authority a copy of the test report for the tests performed on the returned breakers.

Item 15 – Warranty

- Warranty should begin when equipment is placed into service not before.

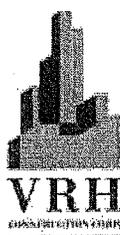
Please have your staff schedule this work with Dan Lochard and Raul Leonardo of my office. The PA will provide 100% coverage of all re-certification work as it is performed.

Michael C. Wallace, P.E. LEED AP
 Senior Resident Engineer
 Newark Liberty International Airport - CTA
 (973) 622-0800 x 251 (Building 125)
 (973) 622-0172 FAX
 (973) 390-5519 Cell
 E-mail: mcwallac@panynj.gov

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Tuesday, September 07, 2010 10:01 AM
To: Wallace, Michael
Subject: Bus bar

Mike

Can we get a release on this today



Jeffrey Konen
Vice President
 320 Grand Ave.
 Englewood, NJ 07631
 Phone: 201-871-4422
 Fax: 201-871-6727 Mobile: 201-259-4685
 www.vrhcorp.com

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Lochard, Daniel

From: Wallace, Michael
Sent: Thursday, September 16, 2010 10:27 AM
To: Lochard, Daniel; Leonardo, Raul; Ret, Herman; Huda, Syed; LaMarca, Thomas
Cc: Haines, Dawn; Simeonidis, Nicholas; Johnson, Caesar; Radics, Frank; McKeon, Sarah
Subject: FW: Bus bar
Attachments: WLCertTestReport.pdf; ANSI C37.50 LVPB Production Tests.doc

Gents,

Please review and provide any additional comments.

Dawn – We need to eventually memorialize all of the correspondences and responses into a complete package for the files and the Facility – I have all of the emails if you are missing any – see me to discuss.

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From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Monday, September 13, 2010 12:06 PM
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Don Sapanara

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Sent: Tuesday, September 07, 2010 1:53 PM

To: Al Fosbenner; Don Sapanara

Cc: Winkler, Eric

Subject: FW: Bus bar

Al/Don

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Jeffrey Konen
Vice President

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Fax: 201-871-6727 Mobile: 201-259-4685
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From: Wallace, Michael [mailto:mcwallac@panynj.gov]
Sent: Tuesday, September 07, 2010 1:25 PM
To: Konen, Jeff
Cc: Leonardo, Raul; Winkler, Eric; Lochard, Daniel
Subject: RE: Bus bar

Jeff,

As per our previous discussion, VRH is directed to proceed with the busbar re-certification process as outlined in your latest correspondence, dated 8-26-2010. This is an Approved as Noted with the following comments that need to be addressed and/or clarified but are deemed to be minor in nature:

Item 7

- We still do not have an understanding of the use of Galvanized components in contact with the bus bar -- please clarify.

Item 9

- They should perform a DLOR test on all the bus joints. Preferable a minimum of 100 amps.

Item 11

- We need Siemens to indicate the name of the tests to be performed on returned circuit breakers for recertification. Are they same as the series of tests outlined in **ANSI C37.50-1989, Table 1-Test Sequence I?** Also, Siemens should make available to the Authority a copy of the test report for the tests performed on the returned breakers.

Item 15 – Warranty

- Warranty should begin when equipment is placed into service not before.

Please have your staff schedule this work with Dan Lochard and Raul Leonardo of my office. The PA will provide 100% coverage of all re-certification work as it is performed.

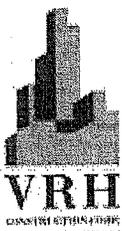
Michael C. Wallace, P.E. LEED AP
Senior Resident Engineer
Newark Liberty International Airport - CTA

(973) 622-0800 x 251(Building 125)
(973) 622-0172 FAX
(973) 390-5519 Cell
E-mail: mcwallac@panynj.gov

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Tuesday, September 07, 2010 10:01 AM
To: Wallace, Michael
Subject: Bus bar

Mike

Can we get a release on this today



Jeffrey Konen
Vice President

320 Grand Ave.
Englewood, NJ 07631
Phone: 201-871-4422
Fax: 201-871-6727 Mobile: 201-259-4685
www.vrhcorp.com

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Lochard, Daniel

From: Wallace, Michael
Sent: Wednesday, September 01, 2010 7:14 AM
To: Lochard, Daniel; Ret, Herman; Huda, Syed
Cc: Heitmann, James; Radics, Frank; LaMarca, Thomas; Leonardo, Raul; McConkey, John; Roytman, Leonid; McKeon, Sarah; Simeonidis, Nicholas; Johnson, Caesar; Hegarty, Brian; Berty, Sherry; Hogan, Kevin; Leggett, Gregg; Sienkiewicz, Stanley
Subject: EWR 264.003 - Discoloration of Busbar - Resolution

Attached please find a letter from VRH with corresponding supporting documents from Siemens regarding the Inspection and Recertification Procedure for SWGR SA, SB, NB and EMDS (North).

From our previous meeting, the only change is that a 4 year warranty has been offered – prior to receipt of this letter, I did confirm with Jim Heitmann that this was acceptable to the Facility.

Dan/Herman/Syed – Please review the document and advise of any comments.

I believe at this time that the PA has received an equitable solution to this problem and by Wednesday, September 8th, I plan on accepting this plan and directing VRH to proceed to get LLE's electrical work back on track. I will incorporate any of your comments into this directive.

Mike



VRH Letter -
Remediation of Bu..

Lochard, Daniel

From: Wallace, Michael
Sent: Thursday, July 29, 2010 12:13 PM
To: Heitmann, James; Radics, Frank; Ret, Herman
Cc: Simeonidis, Nicholas; Leonardo, Raul; Lochard, Daniel; Johnson, Caesar; Hegarty, Brian; McConkey, John; LaMarca, Thomas; Huda, Syed; Roytman, Leonid; McKeon, Sarah
Subject: EWR 264.003 - Bus Bar Discoloration

A meeting was held yesterday with the following in attendance:

M. Wallace, R. Leonardo, D. Lochard – PA CMD
 H. Ret, N. Simeonidis – PA EWR Facility
 J. Konen, E. Winkler – VRH
 D. Sapanara, R. Elliot – SM Electric.
 B. Powell, H. Josten, D. Schornstein – Siemens (via teleconference)

This meeting was held at the request of VRH to review the specific items highlighted in the 7/23/2010 letter, M. Wallace to J. Konen prior to providing the PA with an official response and a proposed remediation plan.



Busbar.pdf

The official response from VRH is attached for the Facility's review and comment.

The Resident Engineer's Office recommends acceptance of this latest remediation plan from VRH, SM & Siemens with the following stipulations added:

- PA would require a 3 year warranty instead of 2 and a separate 5 year warranty on the busbar itself since recoating of the entire busbar will not be performed per Contract Specifications.
- The recertification process must also address the galvanized bracing/connections and address any required coating to prevent further corrosion.
- The disassembling (destructive testing) of at least one trip unit and one molded case breaker will be performed in the field in the presence of the PA. Similarly, at least one WL breaker will be disassembled and re-assembled on site in addition to the ones being shipped offsite. **Do we want all disassembling to be done on site?**
- The recertification process will be fully witnessed by PA representatives (CMD/PA Electrical staff)
- This recertification process includes SA, SB, NB and the North Generator SWGear (EMDS-North).

I will put a meeting on the calendar for early next week to finalize the PA's position.

Thanks.

Mike

Lochard, Daniel

From: Wallace, Michael
Sent: Friday, July 09, 2010 8:49 AM
To: Ret, Herman; McConkey, John; Roytman, Leonid; Huda, Syed
Cc: Hegarty, Brian; Heitmann, James; Simeonidis, Nicholas; Radics, Frank; McKeon, Sarah; LaMarca, Thomas; Lochard, Daniel; Johnson, Caesar; Bullard, John
Subject: RE: Bus Discoloration Letter

If anyone else has comments, please forward to me by Tuesday of next week so that I can send a response back to the Contractor. From there, I would expect to have a second meeting with the Contractors and Siemens to hopefully iron out a path to resolve.

Thanks.

Mike

From: Ret, Herman
Sent: Friday, July 09, 2010 8:46 AM
To: Wallace, Michael; McConkey, John; Roytman, Leonid; Huda, Syed
Cc: Hegarty, Brian; Heitmann, James; Simeonidis, Nicholas; Radics, Frank; McKeon, Sarah; LaMarca, Thomas; Lochard, Daniel; Johnson, Caesar; Bullard, John
Subject: RE: Bus Discoloration Letter

I have the following comments;

- Pg 2 how will the bus be cleaned between the stacked bus bars? How will it be verified?
- Pg 2 Recommended Steps, The installation of brushed on electroplate on the exposed electrical connection points does nothing for the rest of the buss that was supposed to be plated by specification.
- Pg 2 what is the procedure if evidence of corrosion is found on any of the equipment identified in (1) through (6)?
- If we allow the installation of this brush on plating it should be done by a qualified individual, not the contractor. Since the bus bar must be removed from the switch gear perhaps it would be better to send it out to a qualified plating company?
- I see no mention of inspecting or replacing the electronic trip units.
- The extended warranty should be for 12 months from the time the equipment is placed into service. We already have the issue of equipment that is no longer under warranty being installed.

From: Wallace, Michael
Sent: Tuesday, July 06, 2010 1:20 PM
To: McConkey, John; Roytman, Leonid; Huda, Syed
Cc: Hegarty, Brian; Heitmann, James; Simeonidis, Nicholas; Radics, Frank; McKeon, Sarah; Ret, Herman; LaMarca, Thomas; Lochard, Daniel; Johnson, Caesar; Bullard, John
Subject: FW: Bus Discoloration Letter

John,

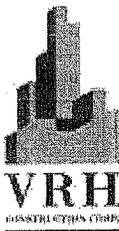
Please review the attached and provide any comments. I will try to set up a in-house meeting next week to discuss.

Mike

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Thursday, July 01, 2010 3:10 PM
To: Wallace, Michael; Leonardo, Raul
Cc: Winkler, Eric
Subject: FW: Bus Discoloration Letter

Mike

Attached please find correspondence from Siemens regarding the Bus Bar and proposed remedial action prior to recertification of the equipment by Siemens.
In addition, product data for the proposed remedial product is attached for review.



Jeffrey Konen
Vice President

320 Grand Ave.
Englewood, NJ 07631
Phone: 201-871-4422
Fax: 201-871-6727 Mobile: 201-259-4685
www.vrhcorp.com

Lochard, Daniel

From: Wallace, Michael
Sent: Tuesday, July 06, 2010 1:20 PM
To: McConkey, John; Roytman, Leonid; Huda, Syed
Cc: Hegarty, Brian; Heitmann, James; Simeonidis, Nicholas; Radics, Frank; McKeon, Sarah; Ret, Herman; LaMarca, Thomas; Lochard, Daniel; Johnson, Caesar; Bullard, John
Subject: FW: Bus Discoloration Letter
Attachments: SFX69E.PDF; Attachment 10 - Cool Amp.pdf

John,

Please review the attached and provide any comments. I will try to set up a in-house meeting next week to discuss.

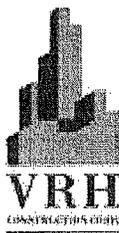
Mike

From: Konen, Jeff [<mailto:J.Konen@vrhcorp.com>]
Sent: Thursday, July 01, 2010 3:10 PM
To: Wallace, Michael; Leonardo, Raul
Cc: Winkler, Eric
Subject: FW: Bus Discoloration Letter

Mike

Attached please find correspondence from Siemens regarding the Bus Bar and proposed remedial action prior to recertification of the equipment by Siemens.

In addition, product data for the proposed remedial product is attached for review.



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Vice President

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 Fax: 201-871-6727 Mobile: 201-259-4685
www.vrhcorp.com

Lochard, Daniel

From: McConkey, John
Sent: Friday, May 21, 2010 2:59 PM
To: Wallace, Michael
Cc: Simeonidis, Nicholas; Leonardo, Raul; Berty, Sherry; Lochard, Daniel; Hegarty, Brian; Prince, Roger; Roytman, Leonid; Rothman, Paul
Subject: RE: EWR 264.003 - Discoloration of the BusBar (Large File due to attachments)

We have reviewed all of the documents and further investigated this issue with my Corrosion Engineer and Electrical Integrity Supervisor. I offer the following conclusions and recommendations:

The specification called for silver plating the copper bus connections. Siemens' practice is to apply silver to the entire bus. We believe Siemens applied the silver using a common industry practice called "Silver Flashing", which applies a very thin layer of silver. Small voids in the silver plating, in the presence of moisture, can cause the silver and copper to react galvanically. This would produce the copper oxide that was indicated in the report by Lucius Pitkin. We believe that the combination of the extremely thin layer of silver and storing the switchgear in a high moisture environment caused this corrosion to occur.

Since the bus is no longer in the presence of a moist environment, we do not anticipate further corrosion to occur. The silver plating appears to be intact on the joints, since they were not exposed, and the joints have adequate contact conductivity as indicated by the resistance measurements. The problem with the bus appears to be more of a cosmetic issue at this point than one of electrical integrity. As a precaution we recommend that a full thermographic inspection be performed six months after the switchgear is placed in service.

Since the switchgear was subjected to conditions that caused this corrosion to occur, of greater concern is what effect this may have had on the more sensitive components of the switchgear such as the circuit breakers, electronics, and control wiring. Since Siemens has stated, in their letter to S.M Electric dated 3/16 2010, "Plated bussing has a tendency to naturally oxidize..." and "...this is not expected to negatively impact its performance." If this is correct, then they should not object to providing us with an extended warranty against corrosion related failure of the bus and all other switchgear components as a precondition to our acceptance of this equipment.

-----Original Message-----

From: Wallace, Michael
Sent: Thursday, May 06, 2010 3:09 PM
To: McConkey, John; Roytman, Leonid
Cc: Simeonidis, Nicholas; Leonardo, Raul; Berty, Sherry; Lochard, Daniel; Hegarty, Brian; Prince, Roger
Subject: EWR 264.003 - Discoloration of the BusBar (Large File due to attachments)

John,

As per our discussion, I am attaching all information and correspondences that we have to date on this issue and are asking for Engineering Design to review and provide any recommendation on how to mitigate/resolve this issue with the manufacturer, Siemens.

<< File: 20100429105822625.pdf >> This is SM Electric response to RE Letter

<< File: DOC100506-001.pdf >> RE Letter to GC

<< File: DOC100420-001.pdf >> Lucius Pitkin Report

<< File: DOC100406.pdf >> Siemen's SwitchGear Cut Sheet

<< File: Newark Airport-Bus discoloration.pdf >> Siemen's Response to Discoloration Issue

<< File: IMG_0080.jpg >> << File: IMG_0086.jpg >> Pictures of Discolored Buss

As we discussed, my staff can facilitate a site inspection whenever your staff is available. Raul Leonardo is the ARE for the project and the electrical inspectors are Dan Lochard and Sherry Berty.

Thanks again and call me if you require any additional information.

Michael C. Wallace, P.E. LEED AP
Senior Resident Engineer
Newark Liberty International Airport - CTA
(973) 622-0800 x 251 (Building 125)
(973) 622-0172 FAX
(973) 390-5519 Cell
E-mail: mcwallac@panynj.gov

Lochard, Daniel

From: Wallace, Michael
Sent: Wednesday, April 28, 2010 7:28 AM
To: Leonardo, Raul; Lochard, Daniel
Subject: FW: EWR-264.003 Copper Bus Sample

Please follow up with John

From: Bullard, John
Sent: Friday, April 23, 2010 10:18 AM
To: Wallace, Michael
Cc: Lochard, Daniel
Subject: EWR-264.003 Copper Bus Sample

Mike,
Any comments on the report?
There are a couple PA staff with knowledge of copper busses - Paul Rothman and Eduard Fayfman.
I have the sample back from Lucius Pitkin.

John Bullard
Supervising Engineer
The Port Authority of NY & NJ
201-216-2993

Lochard, Daniel

From: Wallace, Michael
Sent: Monday, April 26, 2010 8:35 AM
To: Leonardo, Raul; Lochard, Daniel
Subject: FW: draft letter - stained bus bars

Minor grammar change - good to go.

I also fixed your phone number - it was mysteriously incomplete!!

From: Leonardo, Raul
Sent: Monday, April 26, 2010 8:12 AM
To: Wallace, Michael
Cc: Lochard, Daniel
Subject: draft letter - stained bus bars



rejected
bus-bars.doc

Mike - specs reads that " bus bars shall be high conductivity copper having silver-plated joints".

We've asked Ajit what is meant by "joints".

Lochard, Daniel

From: Wallace, Michael
Sent: Monday, April 19, 2010 11:20 AM
To: Ret, Herman; Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar; Simeonidis, Nicholas; Prince, Roger; Berty, Sherry; Parfinik, Peter; LaMarca, Thomas; Hegarty, Brian
Subject: RE: EWR 264.003 - South Substation SwitchGear Bus Discoloration

PA Materials forwarded the bus piece to Lucius Pitkin. They scraped the oxidation off of a piece of buss and are performing a chemical analysis.

Will advise and set up a meeting as soon as we have the results.

Mike

From: Ret, Herman
Sent: Monday, April 19, 2010 10:53 AM
To: Ret, Herman; Wallace, Michael; Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar; Simeonidis, Nicholas; Prince, Roger; Berty, Sherry; Parfinik, Peter; LaMarca, Thomas
Subject: RE: EWR 264.003 - South Substation SwitchGear Bus Discoloration

Mike

I understand that the switch gear delivered for the north Substation is in the same condition. Apparently there is an issue with how and where the equipment was stored for the past year or two.

Herman

From: Ret, Herman
Sent: Wednesday, April 14, 2010 3:27 PM
To: Wallace, Michael; Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar; Simeonidis, Nicholas; Prince, Roger; Berty, Sherry; Parfinik, Peter; LaMarca, Thomas
Subject: RE: EWR 264.003 - South Substation SwitchGear Bus Discoloration

Michael,

I understand that the switchgear that was delivered today is in the same condition.

Herman

From: Wallace, Michael
Sent: Thursday, April 08, 2010 12:36 PM
To: Alvarez, Alex; Bullard, John; Ret, Herman
Cc: Webber, Daniel; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar; Simeonidis, Nicholas; Prince, Roger; Berty, Sherry
Subject: RE: EWR 264.003 - South Substation SwitchGear Bus Discoloration

Herman,

To update you on where we are with this issue:

- CMD is awaiting results of the conductivity test performed by NCE for a piece of the buss that exhibits this oxidation.
- CMD is forwarding a piece of the discolored buss to PA Materials who is sending it out to Lucius Pitkin (a metallurgist) for a non-destructive test of the bus for material confirmation
- In my conversations with John Bullard of PA Materials, oxidation on copper can manifests in different colors based on the environment that the bus was exposed to during storage. (For example, copper on the exterior of buildings has

green oxidation based on air and rain contaminants).

- Once CMD has collected all of this information, we will set up a meeting with all parties to review and discuss the next appropriate steps.

Michael C. Wallace, P.E. LEED AP
 Senior Resident Engineer
 Newark Liberty International Airport - CTA
 (973) 622-0800 x 251 (Building 125)
 (973) 622-0172 FAX
 (973) 390-5519 Cell
 E-mail: mcwallac@panynj.gov

From: Wallace, Michael
Sent: Monday, April 05, 2010 10:03 AM
To: Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Ret, Herman; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar
Subject: EWR 264.003 - South Substation SwitchGear Bus Discoloration

<< Message: FW: Siemens Bus Discoloration Letter >> << Message: South Substation Switch Gear Bus >>

Alex, John,

I have attached two emails regarding the subject issue. My staff and Engineering Design have reviewed the discoloration of the bus with the manufacturer Siemens and Siemens has gone on record stating that discoloration is some form of oxidation and will not affect the operation of the equipment; however, PA Electrical Maintenance still has reservations regarding and rightfully so.

I am requesting PA Materials assistance in reviewing this oxidation issue so that the next appropriate steps can be taken.

Dan Lochard from my staff is well versed on this issue and can accommodate a site visit as needed.

Please call me or Dan for any additional information.

Michael C. Wallace, P.E. LEED AP
 Senior Resident Engineer
 Newark Liberty International Airport - CTA
 (973) 622-0800 x 251 (Building 125)
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 E-mail: mcwallac@panynj.gov

Lochard, Daniel

From: Wallace, Michael
Sent: Thursday, April 08, 2010 12:36 PM
To: Alvarez, Alex; Bullard, John; Ret, Herman
Cc: Webber, Daniel; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar; Simeonidis, Nicholas; Prince, Roger; Berty, Sherry
Subject: RE: EWR 264.003 - South Substation SwitchGear Bus Discoloration

Herman,

To update you on where we are with this issue:

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From: Wallace, Michael
Sent: Monday, April 05, 2010 10:03 AM
To: Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Ret, Herman; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar
Subject: EWR 264.003 - South Substation SwitchGear Bus Discoloration

<< Message: FW: Siemens Bus Discoloration Letter >> << Message: South Substation Switch Gear Bus >>

Alex, John,

I have attached two emails regarding the subject issue. My staff and Engineering Design have reviewed the discoloration of the bus with the manufacturer Siemens and Siemens has gone on record stating that discoloration is some form of oxidation and will not affect the operation of the equipment; however, PA Electrical Maintenance still has reservations regarding and rightfully so.

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Dan Lochard from my staff is well versed on this issue and can accommodate a site visit as needed.

Please call me or Dan for any additional information.

Michael C. Wallace, P.E. LEED AP

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(973) 390-5519 Cell
E-mail: mcwallac@panynj.gov

Lochard, Daniel

From: Wallace, Michael
Sent: Monday, April 05, 2010 10:03 AM
To: Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Ret, Herman; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar
Subject: EWR 264.003 - South Substation SwitchGear Bus Discoloration



FW: Siemens Bus South Substation
Discoloration ... Switch Gear B...

Alex, John,

I have attached two emails regarding the subject issue. My staff and Engineering Design have reviewed the discoloration of the bus with the manufacturer Siemens and Siemens has gone on record stating that discoloration is some form of oxidation and will not affect the operation of the equipment; however, PA Electrical Maintenance still has reservations regarding and rightfully so.

I am requesting PA Materials assistance in reviewing this oxidation issue so that the next appropriate steps can be taken.

Dan Lochard from my staff is well versed on this issue and can accommodate a site visit as needed.

Please call me or Dan for any additional information.

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Senior Resident Engineer
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(973) 622-0800 x 251 (Building 125)
(973) 622-0172 FAX
(973) 390-5519 Cell
E-mail: mcwallac@panynj.gov

Lochard, Daniel

From: Lochard, Daniel
Sent: Monday, April 05, 2010 9:50 AM
To: Wallace, Michael
Subject: FW: Siemens Bus Discoloration Letter
Attachments: Newark Airport-Bus discoloration.pdf; C1260X-TR-253.pdf

From: Lochard, Daniel
Sent: Wednesday, March 17, 2010 3:39 PM
To: Ret, Herman
Cc: LaMarca, Thomas; Johnson, Caesar; Leonardo, Raul; Berty, Sherry; Haldipur, Ajit
Subject: FW: Siemens Bus Discoloration Letter

Good afternoon Herman,

Please see the attached letter from the Siemens Warranty Department concerning the Switchgear SA bus discoloration. Ajit has reviewed the letter and finds it acceptable. If there are any questions, feel free to give me a call.

Thanks,

From: Winkler, Eric [<mailto:E.Winkler@vrhcorp.com>]
Sent: Wednesday, March 17, 2010 8:57 AM
To: Lochard, Daniel; Leonardo, Raul
Subject: Fw: Siemens Bus Discoloration Letter

From: Russ Elliott
To: Winkler, Eric
Sent: Wed Mar 17 08:36:26 2010
Subject: Siemens Bus Discoloration Letter
Eric,

See attached files.

Thank you,

Russ Elliott
S.M. Electric Co., Inc.
at Newark Airport

Phone: 1-973-622-1470
Fax: 1-973-622-1471
Cell: 1-732-904-2354

Lochard, Daniel

From: Ret, Herman
Sent: Wednesday, March 31, 2010 11:18 AM
To: Wallace, Michael
Cc: Haldipur, Ajit; Huda, Syed; Radics, Frank; Johnson, Caesar; Leonardo, Raul; LaMarca, Thomas; Parfinik, Peter; Lochard, Daniel
Subject: South Substation Switch Gear Bus



IMG_0086.jpg



IMG_0080.jpg



IMG_0087.jpg

There is no way this is OK. Something is very wrong that brand new bus work tarnished in this way. (In my opinion this is more than simple tarnish, There is definitely some type of contaminant on the bus.

I am additionally concerned that this might appear between the stacked bus.

I have never seen anything like this and am not comfortable with placing it into service.

Herman Ret
Newark Liberty International Airport
973-961-6144

Ret, Herman

From: Lochard, Daniel
Sent: Friday, November 19, 2010 11:12 AM
To: Ret, Herman
Cc: LaMarca, Thomas; Leonardo, Raul
Subject: Siemens Recertification Testing

Herman,

The Siemens Technician just completed today's testing session for Switchgear SA. He will return once the WL circuit breakers have been returned from Texas, next week. I'll provide the date as soon as I receive it.

Daniel

Ret, Herman

From: Ret, Herman
Sent: Friday, November 19, 2010 7:51 AM
To: Leonardo, Raul
Cc: Lochard, Daniel; Johnson, Caesar; Wallace, Michael; LaMarca, Thomas; Radics, Frank
Subject: RE: Switchgear SA Schedule

There is no third party (Independent) testing on the schedule. Complete testing must be performed prior to introducing power.

Before we schedule any shutdowns and after all the requirements are met we need to meet and review and discuss. Once we are satisfied that all obligations are met we can discuss scheduling.

From: Leonardo, Raul
Sent: Thursday, November 18, 2010 4:53 PM
To: Ret, Herman
Cc: Lochard, Daniel; Johnson, Caesar; Wallace, Michael; LaMarca, Thomas
Subject: FW: Switchgear SA Schedule

See attached schedule for Switchgear SA.

Note the target date for the PSEG shutdown.

From: Winkler, Eric [<mailto:E.Winkler@vrhcorp.com>]
Sent: Tuesday, November 16, 2010 3:44 PM
To: Leonardo, Raul; Lochard, Daniel
Subject: FW: Switchgear SA Schedule

Eric Winkler
Project Manager

1 Terminal B Short Term Parking Lot
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Newark Liberty International Airport
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From: Don Sapanara [<mailto:don.sapanara@smelectric.com>]
Sent: Tuesday, November 16, 2010 1:50 PM
To: Winkler, Eric
Cc: Konen, Jeff; Al Fosbenner; Pete Cheche III; Russ Elliott
Subject: Switchgear SA Schedule

Eric,

Our schedule for completing Switchgear SA is attached. We have a commitment from Siemens to meet our testing and recertification dates. I'm waiting for a firm commitment from them on meeting the final report dates.

Don Sapanara
Project Manager

S.M. Electric Co., Inc.
601 New Brunswick Ave.
Rahway, NJ 07065

Main Office:
Phone 732-388-3540
Fax 732-388-3052

ConocoPhillips Site:
Phone 908-523-5508
Fax 908-523-5143

Ret, Herman

From: Ret, Herman
Sent: Friday, November 19, 2010 7:47 AM
To: Wallace, Michael
Subject: Discolored Bus

Mike

I need a copy of the final agreement with Siemens and VRH referencing the discolored Bus. The last I have was 9/16 sent around for comments.

Herman Ret
Newark Liberty International Airport
973-961-6144

Ret, Herman

From: Ret, Herman
Sent: Friday, November 19, 2010 7:44 AM
To: Ret, Herman; Wallace, Michael
Cc: Lochard, Daniel; Leonardo, Raul; Huda, Syed; LaMarca, Thomas; Ballance, Joseph; Radics, Frank; Heitmann, James; Simeonidis, Nicholas; Johnson, Caesar
Subject: RE: TB north sub NA - Bus Corrosion

This issue has not been addressed. The switch gear that was never considered a problem because it was not stored with the others are showing signs of corrosion.

What is the plan?

Do we need to be concerned that whatever is causing this gear to deteriorate will result if deteriorating all the other gear once installed?

-----Original Message-----

From: Ret, Herman
Sent: Tuesday, September 28, 2010 8:54 AM
To: Wallace, Michael
Cc: Lochard, Daniel; Leonardo, Raul; Huda, Syed; LaMarca, Thomas; Ballance, Joseph; Radics, Frank; Heitmann, James; Simeonidis, Nicholas; Johnson, Caesar
Subject: FW: TB north sub NA - Bus Corrosion

Yesterday while looking into a potential problem with the North Switchgear NA (which is energized and serving the facility) we discovered that some of the bus apparently has corrosion like the other switchboards. Switch Board NA however has never been part of the corrosion discussion because unlike the other equipment it was delivered directly to EWR, it was not stored off site. To the best of my knowledge NA has also not been exposed to moisture which based on past discussions was the apparent culprit.

To the best of my recollection and also Chip from SM electric this corrosion did not exist prior to placing the equipment into service.

Ret, Herman

From: Lochard, Daniel
Sent: Friday, November 19, 2010 7:44 AM
To: Ret, Herman
Cc: Johnson, Caesar; Leonardo, Raul; LaMarca, Thomas
Subject: FW: Siemens Technician for Switchgear SA

Herman,

I waited for him also and inquired about the start time more than once. Siemens informed SM Electric at 10:00 AM that the technician was called for an emergency elsewhere, as per the e-mail below.

I'll inquire again about this morning and give you the start time as soon as it is confirmed.

Daniel

From: Russ Elliott [<mailto:russ.elliott@smelectric.com>]
Sent: Thursday, November 18, 2010 10:02 AM
To: Lochard, Daniel
Cc: Winkler, Eric; Don Sapanara
Subject: Siemens Technician for Switchgear SA

Daniel,

Ralph Walkowicz of Siemens just called me. He was called in last night on an emergency in the Massachusetts area and has just completed the work. He will not be on site today but will be here tomorrow from 7:00am to 12:30pm.

Thank you,

Russ Elliott
S.M. Electric Co., Inc.
at Newark Airport

Phone: 1-973-622-1470
Fax: 1-973-622-1471
Cell: 1-732-904-2354

Ret, Herman

From: Ret, Herman
Sent: Friday, November 19, 2010 7:35 AM
To: Lochard, Daniel; LaMarca, Thomas
Cc: Leonardo, Raul; Johnson, Caesar
Subject: RE: Siemens Technician Site Work

Tracking:	Recipient	Read
	Lochard, Daniel	Read: 11/19/2010 7:36 AM
	LaMarca, Thomas	
	Leonardo, Raul	
	Johnson, Caesar	

Dan

I was over there yesterday morning but no one from Siemens was around?

From: Lochard, Daniel
Sent: Wednesday, November 17, 2010 3:00 PM
To: LaMarca, Thomas
Cc: Ret, Herman; Leonardo, Raul; Johnson, Caesar
Subject: FW: Siemens Technician Site Work

Good afternoon Tom,

As per the e-mail below, Siemens will be on site tomorrow and Friday to perform tests on Switchgear SA, as part of the Recertification Process.

I'll be with Siemens all day. Let me know if you or someone else from your office would like to be in attendance.

Daniel

From: Russ Elliott [<mailto:russ.elliott@smelectric.com>]
Sent: Wednesday, November 17, 2010 11:34 AM
To: Winkler, Eric
Cc: Don Sapanara; Lochard, Daniel
Subject: Siemens Technician Site Work

Eric,

Ralph Walkowicz of Siemens has just informed me that he will be in the area tomorrow and Friday and wants to start electrically testing Switchgear SA. This will allow him to get a jump on the remaining recertification process. I do not want to let an opportunity to have a Siemens technician on site pass by, so I agreed that he should start his work tomorrow and continue on Friday. He'll call me tomorrow and let me know what time he'll be here.

Thank you,

Russ Elliott
 S.M. Electric Co., Inc.
 at Newark Airport

Phone: 1-973-622-1470

Fax: 1-973-622-1471
Cell: 1-732-904-2354

Ret, Herman

From: Leonardo, Raul
Sent: Thursday, November 18, 2010 4:53 PM
To: Ret, Herman
Cc: Lochard, Daniel; Johnson, Caesar; Wallace, Michael; LaMarca, Thomas
Subject: FW: Switchgear SA Schedule
Attachments: 2034 Five Week Look for SA 2010-11-15 (SM Electric).pdf

See attached schedule for Switchgear SA.

Note the target date for the PSEG shutdown.

From: Winkler, Eric [<mailto:E.Winkler@vrhcorp.com>]
Sent: Tuesday, November 16, 2010 3:44 PM
To: Leonardo, Raul; Lochard, Daniel
Subject: FW: Switchgear SA Schedule

Eric Winkler
Project Manager

1 Terminal B Short Term Parking Lot
 Construction Trailer
 Newark Liberty International Airport
 Newark, NJ 07114
 Phone: 973-824-2520
 Fax: 973-824-2561 Mobile: 201-481-6901
www.vrhcorp.com

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From: Don Sapanara [<mailto:don.sapanara@smelectric.com>]
Sent: Tuesday, November 16, 2010 1:50 PM
To: Winkler, Eric
Cc: Konen, Jeff; Al Fosbenner; Pete Cheche III; Russ Elliott
Subject: Switchgear SA Schedule

Eric,

Our schedule for completing Switchgear SA is attached. We have a commitment from Siemens to meet our testing and recertification dates. I'm waiting for a firm commitment from them on meeting the final report dates.

Don Sapanara
 Project Manager

S.M. Electric Co., Inc.
601 New Brunswick Ave.
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Main Office:
Phone 732-388-3540
Fax 732-388-3052

ConocoPhillips Site:
Phone 908-523-5508
Fax 908-523-5143

Ret, Herman

From: Lochard, Daniel
Sent: Wednesday, November 03, 2010 12:01 PM
To: Ret, Herman
Cc: LaMarca, Thomas; Leonardo, Raul; Grassi, Robert; Parfinik, Peter; Ballance, Joseph; Hreha, Andrew
Subject: RE: Siemens ETU Testing

Herman,

It will be in the unfinished part of the B1 Lobby, near the South Sub-station.

Daniel

From: Ret, Herman
Sent: Wednesday, November 03, 2010 11:59 AM
To: Lochard, Daniel
Cc: LaMarca, Thomas; Leonardo, Raul; Grassi, Robert; Parfinik, Peter; Ballance, Joseph; Hreha, Andrew
Subject: Re: Siemens ETU Testing

Yes some one from my office will be there.

Where will the testing be performed

From: Lochard, Daniel
To: Ret, Herman
Cc: LaMarca, Thomas; Leonardo, Raul
Sent: Wed Nov 03 11:51:59 2010
Subject: FW: Siemens ETU Testing

Good morning Herman,

Be advised that, as per the e-mail below, Siemens will be on site tomorrow to test the Electronic Trip Units. This work will be performed as part of the Siemens Recertification Process. Please advise if you or one of your Electrical Supervisors will be in attendance.

Daniel

From: Winkler, Eric [<mailto:E.Winkler@vrhcorp.com>]
Sent: Wednesday, November 03, 2010 11:17 AM
To: Leonardo, Raul; Lochard, Daniel
Subject: Fw: Siemens ETU Testing

From: Russ Elliott <russ.elliott@smelectric.com>
To: Winkler, Eric
Cc: Don Sapanara <don.sapanara@smelectric.com>; Lochard, Daniel <dlochard@panynj.gov>
Sent: Wed Nov 03 11:13:13 2010
Subject: Siemens ETU Testing

Eric,

Keith Flowers, a Siemens factory representative, will be here on Thursday, November 4th, to test the four electronic trip units. The testing will begin at approximately 8:30am in the vicinity of our foremen's area in the unfinished space at the south end of Terminal B.

Thank you,

Russ Elliott
S.M. Electric Co., Inc.
at Newark Airport

Phone: 1-973-622-1470
Fax: 1-973-622-1471
Cell: 1-732-904-2354

Ret, Herman

From: Ret, Herman
Sent: Tuesday, September 28, 2010 8:54 AM
To: Wallace, Michael
Cc: Lochard, Daniel; Leonardo, Raul; Huda, Syed; LaMarca, Thomas; Ballance, Joseph; Radics, Frank; Heitmann, James; Simeonidis, Nicholas; Johnson, Caesar
Subject: FW: TB north sub NA - Bus Corrosion
Attachments: IMG00142.jpg

Yesterday while looking into a potential problem with the North Switchgear NA (which is energized and serving the facility) we discovered that some of the bus apparently has corrosion like the other switchboards. Switch Board NA however has never been part of the corrosion discussion because unlike the other equipment it was delivered directly to EWR, it was not stored off site. To the best of my knowledge NA has also not been exposed to moisture which based on past discussions was the apparent culprit.

To the best of my recollection and also Chip from SM electric this corrosion did not exist prior to placing the equipment into service.

Ret, Herman

From: Ret, Herman
Sent: Monday, September 27, 2010 7:25 PM
To: Lochard, Daniel
Cc: Ret, Herman
Subject: TB north sub NA
Attachments: IMG00142.jpg

Bus

Ret, Herman

From: Roytman, Leonid
Sent: Monday, September 20, 2010 10:35 AM
To: Ret, Herman
Cc: Huda, Syed
Subject: FW: Bus bar
Attachments: WLCertTestReport.pdf; ANSI C37.50 LVPB Production Tests.doc

Herman,

I've discussed use of the galvanized steel as bus braces with our corrosion expert Paul Rothman and, in his opinion, for corrosion to occur there has to be moisture and if there is no moisture corrosion does not occur. I and Syed Huda discussed this with John McConkey and we agreed that there not suppose to be any moisture and subsequently any corrosion in an energized substation.

Lenny Roytman

From: Huda, Syed
Sent: Friday, September 17, 2010 4:05 PM
To: Roytman, Leonid
Subject: FW: Bus bar

From: Ret, Herman
Sent: Friday, September 17, 2010 2:41 PM
To: Huda, Syed
Subject: FW: Bus bar

Syed

What do you think of item 7?

From: Wallace, Michael
Sent: Thursday, September 16, 2010 10:27 AM
To: Lochard, Daniel; Leonardo, Raul; Ret, Herman; Huda, Syed; LaMarca, Thomas
Cc: Haines, Dawn; Simeonidis, Nicholas; Johnson, Caesar; Radics, Frank; McKeon, Sarah
Subject: FW: Bus bar

Gents,

Please review and provide any additional comments.

Dawn – We need to eventually memorialize all of the correspondences and responses into a complete package for the files and the Facility – I have all of the emails if you are missing any – see me to discuss.

Mike

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Monday, September 13, 2010 12:06 PM

To: Wallace, Michael
Subject: FW: Bus bar

Mike

Forwarding a response on Item numbers 7,9,11 and 15 to your 9/7/10 correspondence.



Jeffrey Konen
Vice President

320 Grand Ave.
 Englewood, NJ 07631
 Phone: 201-871-4422
 Fax: 201-871-6727 Mobile: 201-259-4685
 www.vrhcorp.com

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From: Don Sapanara [mailto:don.sapanara@smelectric.com]
Sent: Monday, September 13, 2010 8:17 AM
To: Konen, Jeff
Cc: Winkler, Eric; Al Fosbenner
Subject: RE: Bus bar

Jeff,

In response to Mike Wallace's questions below:

Item 7:

This response came from Harry Josten of Siemens.

"The industry including Siemens and our competitors have been using galvanized steel for bus braces, supports, etc. in contact with silver or tin plated bus for decades.

Carbon steel is used because it is inexpensive, strong, tough, and easy to fabricate. It must be coated to prevent corrosion. We prefer to use galvanized steel (zinc coated) because zinc provides superior corrosion protection to the steel than does paint. It also visually differentiates "live" steel parts from grounded steel parts used for the enclosure.

Stainless steel such as alloy 304 has also be used in place of carbon steel. This is usually done to reduce hysteresis loss where inductive heating of steel parts is a problem. We don't have a problem with inductive heating and pass all of our ANSI temperature tests with the carbon steel parts as supplied. Stainless steel also cost several times more per pound than carbon steel and is harder to fabricate. Tools designed to form low carbon steel parts may break or not form stainless properly due to the different material characteristics. Punches may also break trying to punch the harder stainless material.

Reinforced plastics are also much more expensive than low carbon steel and do not have nearly the mechanical strength. Fabrication is also more difficult and costly."

Item 9:

This response came from Allan Worthy of Siemens. The need for a quote for adding the DLOR test will be handled between S.M. and Siemens.

"I haven't requested that INBU do a DLRO test and to the best of my knowledge they aren't planning on doing one. They should be able to do it but you will need to get them to quote an adder for the additional work."

Item 11:

This response came from Allan Worthy of Siemens. The documents are attached.

"Attached is a copy of the Fort Worth breaker certified test report that shows what tests they run and how the information will be displayed. We planned on providing a copy of the test reports for the breakers that are returned for testing. I'm also including a copy of the ANSI C37.50 standard that provides details on what breaker production tests are required."

Item 15 – Warranty:

The warranty for each lineup will take effect after Item 14 – Thermographic Testing has been completed. The thermographic testing will be performed after the equipment has been energized and is in service, so we are testing under actual load conditions.

If Port Authority or VRH have any further questions, please do not hesitate to contact us.

Thanks,

Don Sapanara

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Tuesday, September 07, 2010 1:53 PM
To: Al Fosbenner; Don Sapanara
Cc: Winkler, Eric
Subject: FW: Bus bar

Al/Don

See the following release from the Port on the Bus Bar recertification.
 I agree that the additional comments are minor.

The ball is in your court, For our meeting this Friday at 10:00 am, please prepare a schedule to perform the work and testing associated with the recertification process and your schedule for the installation of the remaining switchgear and switchboards to include proposed dates for required shutdowns.
 We will review this in detail on Friday.

We will then have a follow up meeting with the Port to present our schedule and confirm the requested shutdowns.

 **Jeffrey Konen**
Vice President
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 Englewood, NJ 07631
 Phone: 201-871-4422
 Fax: 201-871-6727 Mobile: 201-259-4685
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From: Wallace, Michael [mailto:mcwallac@panynj.gov]
Sent: Tuesday, September 07, 2010 1:25 PM
To: Konen, Jeff
Cc: Leonardo, Raul; Winkler, Eric; Lochard, Daniel
Subject: RE: Bus bar

Jeff,

As per our previous discussion, VRH is directed to proceed with the busbar re-certification process as outlined in your latest correspondence, dated 8-26-2010. This is an Approved as Noted with the following comments that need to be addressed and/or clarified but are deemed to be minor in nature:

Item 7

- We still do not have an understanding of the use of Galvanized components in contact with the bus bar – please clarify.

Item 9

- They should perform a DLOR test on all the bus joints. Preferable a minimum of 100 amps.

Item 11

- We need Siemens to indicate the name of the tests to be performed on returned circuit breakers for recertification. Are they same as the series of tests outlined in **ANSI C37.50-1989, Table 1-Test Sequence I**? Also, Siemens should make available to the Authority a copy of the test report for the tests performed on the returned breakers.

Item 15 – Warranty

- Warranty should begin when equipment is placed into service not before.

Please have your staff schedule this work with Dan Lochard and Raul Leonardo of my office. The PA will provide 100% coverage of all re-certification work as it is performed.

Michael C. Wallace, P.E. LEED AP
 Senior Resident Engineer
 Newark Liberty International Airport - CTA
 (973) 622-0800 x 251 (Building 125)
 (973) 622-0172 FAX
 (973) 390-5519 Cell
 E-mail: mcwallac@panynj.gov

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Tuesday, September 07, 2010 10:01 AM
To: Wallace, Michael
Subject: Bus bar

Mike

Can we get a release on this today



Jeffrey Konen
Vice President
 320 Grand Ave.
 Englewood, NJ 07631
 Phone: 201-871-4422
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Ret, Herman

From: Huda, Syed
Sent: Monday, September 20, 2010 6:57 AM
To: Ret, Herman
Subject: RE: Bus bar

Herman,
 Let me get back to you regarding this issue. I need to discuss this with John McConkey and Paul Rothman, our corrosion expert.

Thanks
 Syed

From: Ret, Herman
Sent: Friday, September 17, 2010 2:41 PM
To: Huda, Syed
Subject: FW: Bus bar

Syed

What do you think of item 7?

From: Wallace, Michael
Sent: Thursday, September 16, 2010 10:27 AM
To: Lochard, Daniel; Leonardo, Raul; Ret, Herman; Huda, Syed; LaMarca, Thomas
Cc: Haines, Dawn; Simeonidis, Nicholas; Johnson, Caesar; Radics, Frank; McKeon, Sarah
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Sent: Monday, September 13, 2010 12:06 PM
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Sent: Monday, September 13, 2010 8:17 AM
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Cc: Winkler, Eric; Al Fosbenner
Subject: RE: Bus bar

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If Port Authority or VRH have any further questions, please do not hesitate to contact us.

Thanks,

Don Sapanara

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Tuesday, September 07, 2010 1:53 PM
To: Al Fosbenner; Don Sapanara
Cc: Winkler, Eric
Subject: FW: Bus bar

Al/Don

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 I agree that the additional comments are minor.

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 We will review this in detail on Friday.

We will then have a follow up meeting with the Port to present our schedule and confirm the requested shutdowns.

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From: Wallace, Michael [mailto:mcwallac@panynj.gov]
Sent: Tuesday, September 07, 2010 1:25 PM
To: Konen, Jeff
Cc: Leonardo, Raul; Winkler, Eric; Lochard, Daniel
Subject: RE: Bus bar

Jeff,

As per our previous discussion, VRH is directed to proceed with the busbar re-certification process as outlined in your latest correspondence, dated 8-26-2010. This is an Approved as Noted with the following comments that need to be addressed and/or clarified but are deemed to be minor in nature:

Item 7

- We still do not have an understanding of the use of Galvanized components in contact with the bus bar – please clarify.

Item 9

- They should perform a DLOR test on all the bus joints. Preferable a minimum of 100 amps.

Item 11

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Item 15 – Warranty

- Warranty should begin when equipment is placed into service not before.

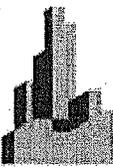
Please have your staff schedule this work with Dan Lochard and Raul Leonardo of my office. The PA will provide 100% coverage of all re-certification work as it is performed.

Michael C. Wallace, P.E. LEED AP
 Senior Resident Engineer
 Newark Liberty International Airport - CTA
 (973) 622-0800 x 251(Building 125)
 (973) 622-0172 FAX
 (973) 390-5519 Cell
 E-mail: mcwallac@panynj.gov

From: Konen, Jeff [mailto:J.Konen@vrhcorp.com]
Sent: Tuesday, September 07, 2010 10:01 AM
To: Wallace, Michael
Subject: Bus bar

Mike

Can we get a release on this today



Jeffrey Konen
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Ret, Herman

From: Ret, Herman
Sent: Wednesday, September 01, 2010 2:56 PM
To: Wallace, Michael; Lochard, Daniel; Huda, Syed
Cc: Heitmann, James; Radics, Frank; LaMarca, Thomas; Leonardo, Raul; McConkey, John; Roytman, Leonid; McKeon, Sarah; Simeonidis, Nicholas; Johnson, Caesar; Hegarty, Brian; Berty, Sherry; Hogan, Kevin; Leggett, Gregg; Sienkiewicz, Stanley
Subject: RE: EWR 264.003 - Discoloration of Busbar - Resolution

Mike

I looked this over and have several comments:

Cleaning and Re-plating

- They make no mention of the training by the manufacturer as previously discussed.

Item 5

- As previously discussed it one joint is found to be unacceptable then all the joints should be inspected.

Item 7

- We still do not have an understanding of the use of Galvanized components in contact with the bus bar.
- As previously discussed it one joint is found to be unacceptable then all the joints should be inspected.

Item 9

- They should perform a DLOR test on all the bus joints. Preferable a minimum of 100 amps.

Item 15 – Warranty

- Warranty should begin when equipment is placed into service not before.

I am wondering as a final test once the switch board is energized and before the load are transferred if we should put a load on the equipment and give it a once over with a Thermo scan?

From: Wallace, Michael
Sent: Wednesday, September 01, 2010 7:14 AM
To: Lochard, Daniel; Ret, Herman; Huda, Syed
Cc: Heitmann, James; Radics, Frank; LaMarca, Thomas; Leonardo, Raul; McConkey, John; Roytman, Leonid; McKeon, Sarah; Simeonidis, Nicholas; Johnson, Caesar; Hegarty, Brian; Berty, Sherry; Hogan, Kevin; Leggett, Gregg; Sienkiewicz, Stanley
Subject: EWR 264.003 - Discoloration of Busbar - Resolution

Attached please find a letter from VRH with corresponding supporting documents from Siemens regarding the Inspection and Recertification Procedure for SWGR SA, SB, NB and EMDS (North).

From our previous meeting, the only change is that a 4 year warranty has been offered – prior to receipt of this letter, I did confirm with Jim Heitmann that this was acceptable to the Facility.

Dan/Herman/Syed – Please review the document and advise of any comments.

I believe at this time that the PA has received an equitable solution to this problem and by Wednesday, September 8th, I plan on accepting this plan and directing VRH to proceed to get LLE's electrical work back on track. I will incorporate any of your comments into this directive.

Mike

<< File: VRH Letter - Remediation of Busbar - 08-26-2010.pdf >>

Ret, Herman

From: Huda, Syed
Sent: Wednesday, September 01, 2010 2:56 PM
To: Wallace, Michael; Lochard, Daniel; Ret, Herman
Cc: Heitmann, James; Radics, Frank; LaMarca, Thomas; Leonardo, Raul; McConkey, John; Roytman, Leonid; McKeon, Sarah; Simeonidis, Nicholas; Johnson, Caesar; Hegarty, Brian; Berty, Sherry; Hogan, Kevin; Leggett, Gregg; Sienkiewicz, Stanley
Subject: RE: EWR 264.003 - Discoloration of Busbar - Resolution

Mike,

Siemens offer looks reasonable to engineering design. However, we request you to ask Siemens to clarify the item #11 in their letter to indicate the name of the tests to be performed on returned circuit breakers for recertification. Are they same as the series of tests outlined in **ANSI C37.50-1989, Table 1-Test Sequence I?** Also, Siemens should made available to the Authority a copy of the test report for the tests performed on the returned breakers.

Syed

From: Wallace, Michael
Sent: Wednesday, September 01, 2010 7:14 AM
To: Lochard, Daniel; Ret, Herman; Huda, Syed
Cc: Heitmann, James; Radics, Frank; LaMarca, Thomas; Leonardo, Raul; McConkey, John; Roytman, Leonid; McKeon, Sarah; Simeonidis, Nicholas; Johnson, Caesar; Hegarty, Brian; Berty, Sherry; Hogan, Kevin; Leggett, Gregg; Sienkiewicz, Stanley
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Mike



VRH Letter -
Remediation of Bu..

Ret, Herman

From: Ret, Herman
Sent: Sunday, August 01, 2010 9:31 AM
To: Wallace, Michael; Heitmann, James; Radics, Frank
Cc: Simeonidis, Nicholas; Leonardo, Raul; Lochard, Daniel; Johnson, Caesar; Hegarty, Brian; McConkey, John; LaMarca, Thomas; Huda, Syed; Roytman, Leonid; McKeon, Sarah
Subject: RE: EWR 264.003 - Bus Bar Discoloration

I have the following Comments;

Mike's Comments;

I agree with the 3 year warranty on equipment and the 5 year on the bus bar, but we need to include some type of re-inspection process and a way to determine if the installation is deteriorating absent of a failure.

As far as disassembling being performed on site can they provide the same level of quality control as the work being performed in the factory?

VRH Letter;

- 1 I think if one joint is discovered to be bad all the joints should be inspected.
 - 2 The bus plating protects the bus from corroding. Absent the plating we are not getting what we paid for.
 - 3 If numerous problems were to be detected with either the inspection or testing at what point would be require all the equipment to be done?
- 2 We should have detailed inspection and testing procedure now prior to making a determination as to whether we are excepting this proposal.

As part of John McConkey May 21, response he recommended Full thermographic inspection be performed six months after switch gear is placed in service. This should be included .

Herman

From: Wallace, Michael
Sent: Thursday, July 29, 2010 12:13 PM
To: Heitmann, James; Radics, Frank; Ret, Herman
Cc: Simeonidis, Nicholas; Leonardo, Raul; Lochard, Daniel; Johnson, Caesar; Hegarty, Brian; McConkey, John; LaMarca, Thomas; Huda, Syed; Roytman, Leonid; McKeon, Sarah
Subject: EWR 264.003 - Bus Bar Discoloration

A meeting was held yesterday with the following in attendance:

M. Wallace, R. Leonardo, D. Lochard – PA CMD
H. Ret, N. Simeonidis – PA EWR Facility
J. Konen, E. Winkler – VRH
D. Sapanara, R. Elliot – SM Electric.
B. Powell, H. Josten, D. Schornstein – Siemens (via teleconference)

This meeting was held at the request of VRH to review the specific items highlighted in the 7/23/2010 letter, M. Wallace to J. Konen prior to providing the PA with an official response and a proposed remediation plan.

The official response from VRH is attached for the Facility's review and comment. << File: Busbar.pdf >>

The Resident Engineer's Office recommends acceptance of this latest remediation plan from VRH, SM & Siemens with the following stipulations added:

- PA would require a 3 year warranty instead of 2 and a separate 5 year warranty on the busbar itself since recoating of the entire busbar will not be performed per Contract Specifications.
- The recertification process must also address the galvanized bracing/connections and address any required coating to prevent further corrosion.
- The disassembling (destructive testing) of at least one trip unit and one molded case breaker will be performed in the field in the presence of the PA. Similarly, at least one WL breaker will be disassembled and re-assembled on site in addition to the ones being shipped offsite. **Do we want all disassembling to be done on site?**
- The recertification process will be fully witnessed by PA representatives (CMD/PA Electrical staff)
- This recertification process includes SA, SB, NB and the North Generator SWGear (EMDS-North).

I will put a meeting on the calendar for early next week to finalize the PA's position.

Thanks.

Mike

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Sent: Thursday, July 29, 2010 12:13 PM
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I will put a meeting on the calendar for early next week to finalize the PA's position.

Thanks.

Mike

Ret, Herman

From: Wallace, Michael
Sent: Friday, July 09, 2010 8:49 AM
To: Ret, Herman; McConkey, John; Roytman, Leonid; Huda, Syed
Cc: Hegarty, Brian; Heitmann, James; Simeonidis, Nicholas; Radics, Frank; McKeon, Sarah; LaMarca, Thomas; Lochard, Daniel; Johnson, Caesar; Bullard, John
Subject: RE: Bus Discoloration Letter

If anyone else has comments, please forward to me by Tuesday of next week so that I can send a response back to the Contractor. From there, I would expect to have a second meeting with the Contractors and Siemens to hopefully iron out a path to resolve.

Thanks.

Mike

From: Ret, Herman
Sent: Friday, July 09, 2010 8:46 AM
To: Wallace, Michael; McConkey, John; Roytman, Leonid; Huda, Syed
Cc: Hegarty, Brian; Heitmann, James; Simeonidis, Nicholas; Radics, Frank; McKeon, Sarah; LaMarca, Thomas; Lochard, Daniel; Johnson, Caesar; Bullard, John
Subject: RE: Bus Discoloration Letter

I have the following comments;

- Pg 2 how will the bus be cleaned between the stacked bus bars? How will it be verified?
- Pg 2 Recommended Steps, The installation of brushed on electroplate on the exposed electrical connection points does nothing for the rest of the buss that was supposed to be plated by specification.
- Pg 2 what is the procedure if evidence of corrosion is found on any of the equipment identified in (1) through (6)?
- If we allow the installation of this brush on plating it should be done by a qualified individual, not the contractor. Since the bus bar must be removed from the switch gear perhaps it would be better to send it out to a qualified plating company?
- I see no mention of inspecting or replacing the electronic trip units.
- The extended warranty should be for 12 months from the time the equipment is placed into service. We already have the issue of equipment that is no longer under warranty being installed.

From: Wallace, Michael
Sent: Tuesday, July 06, 2010 1:20 PM
To: McConkey, John; Roytman, Leonid; Huda, Syed
Cc: Hegarty, Brian; Heitmann, James; Simeonidis, Nicholas; Radics, Frank; McKeon, Sarah; Ret, Herman; LaMarca, Thomas; Lochard, Daniel; Johnson, Caesar; Bullard, John
Subject: FW: Bus Discoloration Letter

John,

Please review the attached and provide any comments. I will try to set up a in-house meeting next week to discuss.

Mike

From: Konen, Jeff [<mailto:J.Konen@vrhcorp.com>]
Sent: Thursday, July 01, 2010 3:10 PM
To: Wallace, Michael; Leonardo, Raul
Cc: Winkler, Eric
Subject: FW: Bus Discoloration Letter

Mike

Attached please find correspondence from Siemens regarding the Bus Bar and proposed remedial action prior to recertification of the equipment by Siemens.
In addition, product data for the proposed remedial product is attached for review.



Jeffrey Konen
Vice President

320 Grand Ave.
Englewood, NJ 07631
Phone: 201-871-4422
Fax: 201-871-6727 Mobile: 201-259-4685
www.vrhcorp.com

Ret, Herman

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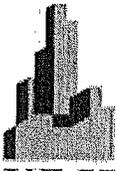
Mike

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www.vrhcorp.com

Ret, Herman

From: Wallace, Michael
Sent: Tuesday, June 15, 2010 7:54 AM
To: McConkey, John; Huda, Syed; Haldipur, Ajit; Radics, Frank; Ret, Herman; Heitmann, James; Simeonidis, Nicholas; Prince, Roger; Hegarty, Brian; McKeon, Sarah; Johnson, Caesar; LaMarca, Thomas
Subject: FW: LLE - EQUIPMENT STORAGE

FYI - for discussion at tomorrow' s meeting.

From: Leonardo, Raul
Sent: Tuesday, June 15, 2010 7:43 AM
To: Wallace, Michael
Cc: Lochard, Daniel
Subject: LLE - EQUIPMENT STORAGE

Mike,

On 6/14/10, a site visit was made to the storage facility *J. Supor & Sons Trucking and Rigging* (subcontractor to SM Electric).

The visit revealed that the equipment is being stored in compliance with the contract requirements (see below).

Siemens equipment still at the storage facility:

- Distribution Panel for ATS-Switchgear NA
- Distribution Panel for ATS-Switchgear NB
- Bus to cable transition sections

Be advised that the above equipment also contains the same bus bar discoloration - see attached photos.

Contract Requirements

The PA switchgear specification reads "Indoor switchgear that cannot be installed immediately shall be stored dry, clean location within a heated building. During storage, the switchgear shall be placed on a level surface."

The PA generator specification has similar language ("...clean, dry space and protect from weather.")

Siemens's specification reads in part "Store so condensation will not form on or in the switchgear and if necessary, apply temporary heat where required to obtain suitable service conditions."



DSCF3174.JPG



DSCF3157.JPG

Ret, Herman

From: Wallace, Michael
Sent: Tuesday, June 08, 2010 9:25 AM
To: Simeonidis, Nicholas; Radics, Frank; Heitmann, James; Hegarty, Brian; McConkey, John; Ret, Herman; Roytman, Leonid
Subject: EWR 264.003 - Letter to VRH regarding Siemen's Busbar

The letter which predicated next Wednesday's meeting.

From: Schweltzer, Ruth
Sent: Tuesday, June 08, 2010 9:22 AM
To: Wallace, Michael
Subject:



DOC100607.pdf

Ret, Herman

From: Ret, Herman
Sent: Tuesday, June 08, 2010 6:52 AM
To: Ret, Herman
Subject: FW: South Substation Switch Gear Bus

From: Ret, Herman
Sent: Wednesday, March 31, 2010 11:18 AM
To: Wallace, Michael
Cc: Haldipur, Ajit; Huda, Syed; Radics, Frank; Johnson, Caesar; Leonardo, Raul; LaMarca, Thomas; Parfinik, Peter; Lochard, Daniel
Subject: South Substation Switch Gear Bus



IMG_0086.jpg



IMG_0080.jpg



IMG_0087.jpg

There is no way this is OK. Something is very wrong that brand new bus work tarnished in this way. (In my opinion this is more than simple tarnish, There is definitely some type of contaminant on the bus.

I am additionally concerned that this might appear between the stacked bus.

I have never seen anything like this and am not comfortable with placing it into service.

Herman Ret
Newark Liberty International Airport
973-961-6144

Ret, Herman

From: LaMarca, Thomas
Sent: Tuesday, June 01, 2010 10:10 AM
To: Ret, Herman
Subject: FW: South Sub Bus Discoloration

This is a followup e-mail

-----Original Message-----

From: LaMarca, Thomas
Sent: Monday, February 22, 2010 8:07 AM
To: Lochard, Daniel
Cc: Leonardo, Raul; Berty, Sherry; Johnson, Caesar; Ret, Herman
Subject: RE: South Substation Switchboard A1 Testing

What is the status of Switchgear SA? The discoloration of the Buswork is a concern

Tom LaMarca
 Electrical Unit Supv. EWR
 973 961-6010

-----Original Message-----

From: Lochard, Daniel
Sent: Monday, February 22, 2010 7:26 AM
To: LaMarca, Thomas
Cc: Leonardo, Raul; Berty, Sherry; Johnson, Caesar; Ret, Herman
Subject: FW: South Substation Switchboard A1 Testing

Good morning Tom,

Be advised that I'll be in the South Sub-station to witness the Siemens inspection/test of the 3,000A pringle switch.

I will also witness NCE's inspection/testing of Switchgear SA and Switchboard A1, which begins today. This test might take a couple of days.

Daniel

From: Russ Elliott [<mailto:russ.elliott@smelectric.com>]
Sent: Thursday, February 18, 2010 11:02 AM
To: Winkler, Eric
Cc: Lochard, Daniel; Don Sapanara; Lovas, Keith
Subject: South Substation Switchboard A1 Testing

Eric,

Bill Poland of NCE will be on site starting Monday, February 22, to start testing Switchboard A1 in the south substation.

Thank you,

Russ Elliott
S.M. Electric Co., Inc.
at Newark Airport

Phone: 1-973-622-1470
Fax: 1-973-622-1471
Cell: 1-732-904-2354

Ret, Herman

From: Ret, Herman
Sent: Sunday, May 30, 2010 12:54 PM
To: Ret, Herman



IMG_0080.jpg



IMG_0088.jpg

Herman Ret
Newark Liberty International Airport
973-961-6144

Ret, Herman

From: Konen, Jeff [J.Konen@vrhcorp.com]
Sent: Thursday, May 27, 2010 9:31 AM
To: Wallace, Michael; Leonardo, Raul
Cc: Winkler, Eric
Subject: Bus Bar discoloration
Attachments: 20100527091323142.pdf

Mike/Raul

Attached please find correspondence from Siemens addressing the bus discoloration issue.

Ret, Herman

From: Wallace, Michael
Sent: Monday, May 24, 2010 7:57 AM
To: Radics, Frank; Ret, Herman
Cc: Heitmann, James; McKeon, Sarah; Simeonidis, Nicholas
Subject: FW: EWR 264.003 - Discoloration of the BusBar (Large File due to attachments)

Attached is Engineering's review and response to the issue at hand.

We met with VRH on Thursday and we are awaiting a formal, more detailed response from Siemens.

Once received, I will call a meeting to review our next steps.

Mike

From: McConkey, John
Sent: Friday, May 21, 2010 2:59 PM
To: Wallace, Michael
Cc: Simeonidis, Nicholas; Leonardo, Raul; Berty, Sherry; Lochard, Daniel; Hegarty, Brian; Prince, Roger; Roytman, Leonid; Rothman, Paul
Subject: RE: EWR 264.003 - Discoloration of the BusBar (Large File due to attachments)

We have reviewed all of the documents and further investigated this issue with my Corrosion Engineer and Electrical Integrity Supervisor. I offer the following conclusions and recommendations:

The specification called for silver plating the copper bus connections. Siemens' practice is to apply silver to the entire bus. We believe Siemens applied the silver using a common industry practice called "Silver Flashing", which applies a very thin layer of silver. Small voids in the silver plating, in the presence of moisture, can cause the silver and copper to react galvanically. This would produce the copper oxide that was indicated in the report by Lucius Pitkin. We believe that the combination of the extremely thin layer of silver and storing the switchgear in a high moisture environment caused this corrosion to occur.

Since the bus is no longer in the presence of a moist environment, we do not anticipate further corrosion to occur. The silver plating appears to be intact on the joints, since they were not exposed, and the joints have adequate contact conductivity as indicated by the resistance measurements. The problem with the bus appears to be more of a cosmetic issue at this point than one of electrical integrity. As a precaution we recommend that a full thermographic inspection be preformed six months after the switchgear is placed in service.

Since the switchgear was subjected to conditions that caused this corrosion to occur, of greater concern is what effect this may have had on the more sensitive components of the switchgear such as the circuit breakers, electronics, and control wiring. Since Siemens has stated, in their letter to S.M Electric dated 3/16 2010, "Plated bussing has a tendency to naturally oxidize..." and "...this is not expected to negatively impact its performance." If this is correct, then they should not object to providing us with an extended warranty against corrosion related failure of the bus and all other switchgear components as a precondition to our acceptance of this equipment.

-----Original Message-----

From: Wallace, Michael
Sent: Thursday, May 06, 2010 3:09 PM
To: McConkey, John; Roytman, Leonid
Cc: Simeonidis, Nicholas; Leonardo, Raul; Berty, Sherry; Lochard, Daniel; Hegarty, Brian; Prince, Roger
Subject: EWR 264.003 - Discoloration of the BusBar (Large File due to attachments)

John,

As per our discussion, I am attaching all information and correspondences that we have to date on this issue and are asking for Engineering Design to review and provide any recommendation on how to mitigate/resolve this issue with the manufacturer, Siemens.

<< File: 20100429105822625.pdf >> This is SM Electric response to RE Letter

<< File: DOC100506-001.pdf >> RE Letter to GC

<< File: DOC100420-001.pdf >> Lucius Pitkin Report

<< File: DOC100406.pdf >> Siemen's SwitchGear Cut Sheet

<< File: Newark Airport-Bus discoloration.pdf >> Siemen's Response to Discoloration Issue

<< File: IMG_0080.jpg >> << File: IMG_0086.jpg >> Pictures of Discolored Buss

As we discussed, my staff can facilitate a site inspection whenever your staff is available. Raul Leonardo is the ARE for the project and the electrical inspectors are Dan Lochard and Sherry Berty.

Thanks again and call me if you require any additional information.

Michael C. Wallace, P.E. LEED AP
Senior Resident Engineer
Newark Liberty International Airport - CTA
(973) 622-0800 x 251 (Building 125)
(973) 622-0172 FAX
(973) 390-5519 Cell
E-mail: mcwallac@panynj.gov

Ret, Herman

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Subject: EWR 264.003 - Discoloration of the BusBar (Large File due to attachments)

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Thanks again and call me if you require any additional information.

Michael C. Wallace, P.E. LEED AP
Senior Resident Engineer
Newark Liberty International Airport - CTA
(973) 622-0800 x 251 (Building 125)
(973) 622-0172 FAX
(973) 390-5519 Cell
E-mail: mcwallac@panynj.gov

Ret, Herman

From: Wallace, Michael
Sent: Wednesday, May 12, 2010 11:12 AM
To: Ret, Herman
Cc: Radics, Frank; McKeon, Sarah
Subject: FW: EWR 264.003 - Discoloration of the BusBar (Large File due to attachments)

Herman,

As per your request, here is the report plus all other info gathered to date.

Mike

From: Wallace, Michael
Sent: Thursday, May 06, 2010 3:09 PM
To: McConkey, John; Roytman, Leonid
Cc: Simeonidis, Nicholas; Leonardo, Raul; Berty, Sherry; Lochard, Daniel; Hegarty, Brian; Prince, Roger
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IMG_0080.jpg



IMG_0086.jpg

Pictures of Discolored Buss

As we discussed, my staff can facilitate a site inspection whenever your staff is available. Raul Leonardo is the ARE for the project and the electrical inspectors are Dan Lochard and Sherry Bertly.

Thanks again and call me if you require any additional information.

Michael C. Wallace, P.E. LEED AP
Senior Resident Engineer
Newark Liberty International Airport - CTA
(973) 622-0800 x 251 (Building 125)
(973) 622-0172 FAX
(973) 390-5519 Cell
E-mail: mcwallac@panynj.gov

Ret, Herman

From: Ret, Herman
Sent: Wednesday, May 12, 2010 11:06 AM
To: Wallace, Michael
Subject: Discolored Bus

Mike

Can I get a copy of the test report for the discolored bus?

Herman Ret
Newark Liberty International Airport
973-961-6144

Ret, Herman

From: Wallace, Michael
Sent: Monday, April 19, 2010 11:20 AM
To: Ret, Herman; Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar; Simeonidis, Nicholas; Prince, Roger; Berty, Sherry; Parfinik, Peter; LaMarca, Thomas; Hegarty, Brian
Subject: RE: EWR 264.003 - South Substation SwitchGear Bus Discoloration

PA Materials forwarded the bus piece to Lucius Pitkin. They scraped the oxidation off of a piece of buss and are performing a chemical analysis.

Will advise and set up a meeting as soon as we have the results.

Mike

From: Ret, Herman
Sent: Monday, April 19, 2010 10:53 AM
To: Ret, Herman; Wallace, Michael; Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar; Simeonidis, Nicholas; Prince, Roger; Berty, Sherry; Parfinik, Peter; LaMarca, Thomas
Subject: RE: EWR 264.003 - South Substation SwitchGear Bus Discoloration

Mike

I understand that the switch gear delivered for the north Substation is in the same condition. Apparently there is an issue with how and where the equipment was stored for the past year or two.

Herman

From: Ret, Herman
Sent: Wednesday, April 14, 2010 3:27 PM
To: Wallace, Michael; Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar; Simeonidis, Nicholas; Prince, Roger; Berty, Sherry; Parfinik, Peter; LaMarca, Thomas
Subject: RE: EWR 264.003 - South Substation SwitchGear Bus Discoloration

Michael,

I understand that the switchgear that was delivered today is in the same condition.

Herman

From: Wallace, Michael
Sent: Thursday, April 08, 2010 12:36 PM
To: Alvarez, Alex; Bullard, John; Ret, Herman
Cc: Webber, Daniel; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar; Simeonidis, Nicholas; Prince, Roger; Berty, Sherry
Subject: RE: EWR 264.003 - South Substation SwitchGear Bus Discoloration

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- CMD is awaiting results of the conductivity test performed by NCE for a piece of the buss that exhibits this oxidation.
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- In my conversations with John Bullard of PA Materials, oxidation on copper can manifests in different colors based on the environment that the bus was exposed to during storage. (For example, copper on the exterior of buildings has

green oxidation based on air and rain contaminants).

- Once CMD has collected all of this information, we will set up a meeting with all parties to review and discuss the next appropriate steps.

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(973) 390-5519 Cell
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From: Wallace, Michael
Sent: Monday, April 05, 2010 10:03 AM
To: Alvarez, Alex; Bullard, John
Cc: Webber, Daniel; Ret, Herman; Lochard, Daniel; Leonardo, Raul; Radics, Frank; Haldipur, Ajit; Roytman, Leonid; Perez, Carlos; Johnson, Caesar
Subject: EWR 264.003 - South Substation SwitchGear Bus Discoloration

<< Message: FW: Siemens Bus Discoloration Letter >> << Message: South Substation Switch Gear Bus >>

Alex, John,

I have attached two emails regarding the subject issue. My staff and Engineering Design have reviewed the discoloration of the bus with the manufacturer Siemens and Siemens has gone on record stating that discoloration is some form of oxidation and will not affect the operation of the equipment; however, PA Electrical Maintenance still has reservations regarding and rightfully so.

I am requesting PA Materials assistance in reviewing this oxidation issue so that the next appropriate steps can be taken.

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Please call me or Dan for any additional information.

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<< Message: FW: Siemens Bus Discoloration Letter >> << Message: South Substation Switch Gear Bus >>

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Subject: EWR 264.003 - South Substation SwitchGear Bus Discoloration



FW: Siemens Bus South Substation
Discoloration ... Switch Gear B...

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Ret, Herman

From: Lochard, Daniel
Sent: Monday, April 05, 2010 9:50 AM
To: Wallace, Michael
Subject: FW: Siemens Bus Discoloration Letter
Attachments: Newark Airport-Bus discoloration.pdf; C1260X-TR-253.pdf

From: Lochard, Daniel
Sent: Wednesday, March 17, 2010 3:39 PM
To: Ret, Herman
Cc: LaMarca, Thomas; Johnson, Caesar; Leonardo, Raul; Berty, Sherry; Haldipur, Ajit
Subject: FW: Siemens Bus Discoloration Letter

Good afternoon Herman,

Please see the attached letter from the Siemens Warranty Department concerning the Switchgear SA bus discoloration. Ajit has reviewed the letter and finds it acceptable. If there are any questions, feel free to give me a call.

Thanks,

From: Winkler, Eric [<mailto:E.Winkler@vrhcorp.com>]
Sent: Wednesday, March 17, 2010 8:57 AM
To: Lochard, Daniel; Leonardo, Raul
Subject: Fw: Siemens Bus Discoloration Letter

From: Russ Elliott
To: Winkler, Eric
Sent: Wed Mar 17 08:36:26 2010
Subject: Siemens Bus Discoloration Letter
Eric,

See attached files.

Thank you,

Russ Elliott
S.M. Electric Co., Inc.
at Newark Airport

Phone: 1-973-622-1470
Fax: 1-973-622-1471
Cell: 1-732-904-2354

Ret, Herman

From: Ret, Herman
Sent: Wednesday, March 31, 2010 11:18 AM
To: Wallace, Michael
Cc: Haldipur, Ajit; Huda, Syed; Radics, Frank; Johnson, Caesar; Leonardo, Raul; LaMarca, Thomas; Parfinik, Peter; Lochard, Daniel
Subject: South Substation Switch Gear Bus

Tracking:	Recipient	Read
	Wallace, Michael	
	Haldipur, Ajit	Read: 3/31/2010 11:27 AM
	Huda, Syed	Read: 3/31/2010 11:28 AM
	Radics, Frank	Read: 3/31/2010 11:19 AM
	Johnson, Caesar	Read: 3/31/2010 11:43 AM
	Leonardo, Raul	
	LaMarca, Thomas	
	Parfinik, Peter	
	Lochard, Daniel	Read: 3/31/2010 11:04 PM



IMG_0086.jpg



IMG_0080.jpg



IMG_0087.jpg

There is no way this is OK. Something is very wrong that brand new bus work tarnished in this way. (In my opinion this is more than simple tarnish, There is definitely some type of contaminant on the bus.

I am additionally concerned that this might appear between the stacked bus.

I have never seen anything like this and am not comfortable with placing it into service.

Herman Ret
 Newark Liberty International Airport
 973-961-6144

Ret, Herman

From: Lochard, Daniel
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Phone: 1-973-622-1470
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Ret, Herman

From: Ret, Herman
Sent: Thursday, July 18, 2013 9:20 AM
To: Wallace, Michael; Johnson, Caesar; Lochard, Daniel; Leonardo, Raul
Cc: Trubek, Virginia; Dulski, Kenneth; MCCarthy, Jacqueline; Heitmann, James
Subject: RE: Terminal B South Sub

The thing with this is that it is necessary to ensure the equipment is not deteriorating to the point of failure. We were sold this approach as some insurance when we proceed with the installation of the degraded equipment. Not having this installed leaves us blind as to the condition of the equipment.

From: Wallace, Michael
Sent: Thursday, July 18, 2013 9:07 AM
To: Johnson, Caesar; Ret, Herman; Lochard, Daniel; Leonardo, Raul
Cc: Trubek, Virginia; Dulski, Kenneth; MCCarthy, Jacqueline; Heitmann, James
Subject: RE: Terminal B South Sub

That is basically the case. It continues to be a punch list item with VRH and we have sufficient retainage being held against VRH to accomplish this work. Currently, SM will not perform the work due to their claim and the claim is probably going to a Chief Engineer's decision (the first one in over 20 years).

We will resolve the issue prior to final closeout but I have no timeframe currently.

Mike

From: Johnson, Caesar
Sent: Thursday, July 18, 2013 9:04 AM
To: Ret, Herman
Cc: Wallace, Michael; Trubek, Virginia; Dulski, Kenneth; MCCarthy, Jacqueline; Heitmann, James
Subject: RE: Terminal B South Sub

As I understand nothing was done due to an ongoing lawsuit with SM Electric.

Mike W. Any idea where we are on this? It was promised by VRH.

From: Ret, Herman
Sent: Thursday, July 18, 2013 8:41 AM
To: Johnson, Caesar
Cc: Wallace, Michael; Trubek, Virginia; Dulski, Kenneth; MCCarthy, Jacqueline; Heitmann, James
Subject: RE: Terminal B South Sub

This is still an open issue. As part of accepting the switch gear we were told a monitoring system was going to be installed yet to date nothing has been done. What is the status?

Herman

From: Johnson, Caesar
Sent: Thursday, February 16, 2012 11:13 AM
To: Lochard, Daniel; Wallace, Michael; Nunez, Daniel
Cc: Ballance, Joseph; Grassi, Robert; Hreha, Andrew; LaMarca, Thomas; Nunez, Daniel; Berty, Sherry; Leggett, Gregg; Parfinik, Peter; Ret, Herman; Simeonidis, Nicholas
Subject: RE: Terminal B South Sub

To all:

Pursuant to a LLE Progress Meeting held yesterday, I asked that Aviation and Construction sit down and revisit what was agreed to in regards to thermographic testing on the switch gear equipment for the North and South Substations and North Gen Room. According to VRH, they plan on beginning the testing and monitoring but they apparently never agreed in paying for numerous shut downs that will be associated with this effort.

The costs for the shutdowns will be significant and if the PA is agreeing to accept the gear with positive results after testing, why are we paying for the shutdowns and temporary power??

Please set up as soon as possible.

CJJ

From: Lochard, Daniel
Sent: Tuesday, February 14, 2012 8:20 AM
To: Ret, Herman
Cc: Ballance, Joseph; Grassi, Robert; Hreha, Andrew; LaMarca, Thomas; Nunez, Daniel; Berty, Sherry; Leggett, Gregg; Johnson, Caesar; Parfinik, Peter
Subject: RE: Terminal B South Sub

Herman,

We received a preliminary schedule (yesterday) from VRH for the thermographic testing.
A reply letter is being sent this morning because there are still many unanswered questions.

Daniel

From: Ret, Herman
Sent: Tuesday, February 14, 2012 8:16 AM
To: Lochard, Daniel; Parfinik, Peter
Cc: Ballance, Joseph; Grassi, Robert; Hreha, Andrew; LaMarca, Thomas; Nunez, Daniel; Berty, Sherry; Leggett, Gregg; Johnson, Caesar
Subject: RE: Terminal B South Sub

Dan,

What is the status of the heat monitoring systems for the switch gear?

Herman

From: Lochard, Daniel
Sent: Tuesday, February 14, 2012 8:11 AM
To: Parfinik, Peter
Cc: Ballance, Joseph; Grassi, Robert; Hreha, Andrew; LaMarca, Thomas; Ret, Herman; Nunez, Daniel; Berty, Sherry; Leggett, Gregg; Johnson, Caesar
Subject: RE: Terminal B South Sub

Good morning Peter,

Here's an update on the South Sub-Station issues that were raised.

- 1 The emergency lighting problem is being reviewed.
- 2 Our electrician has informed us that the buzzing in Switchgear SB might be coming from the PSE&G metering CT cabinet. PSE&G will have a technician inspect the interior of the cabinet today. If the problem is not found and resolved, Siemens will be scheduled for troubleshooting, which may require shutdowns.

Daniel

From: Parfinik, Peter
Sent: Friday, February 10, 2012 9:10 PM
To: Lochard, Daniel
Cc: Ballance, Joseph; Grassi, Robert; Hreha, Andrew; LaMarca, Thomas; Ret, Herman
Subject: Terminal B South Sub

Dan,

There are two issues in the South Sub I would like to make you aware of. Please let me know the outcome.

- The emergency light fixtures do not work.
- The SB main has a loud buzzing sound either from the breaker or the transformer.

Peter Parfinik Jr
Newark Liberty International Airport
O 973-961-6521
C 917-299-8374
F 973-961-6080

Ret, Herman

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Subject: RE: Terminal B South Sub

Is this meeting to review procedure or \$\$.

\$\$ are not an issue – VRH is being sent a letter today confirming that this work and any supporting work (temporary electric) is at no cost to the Authority.

Michael C. Wallace, P.E. LEED AP
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Here's an update on the South Sub-Station issues that were raised.

- 1 The emergency lighting problem is being reviewed.
- 2 Our electrician has informed us that the buzzing in Switchgear SB might be coming from the PSE&G metering CT cabinet. PSE&G will have a technician inspect the interior of the cabinet today. If the problem is not found and resolved, Siemens will be scheduled for troubleshooting, which may require shutdowns.

Daniel

From: Parfinik, Peter
Sent: Friday, February 10, 2012 9:10 PM
To: Lochard, Daniel
Cc: Ballance, Joseph; Grassi, Robert; Hreha, Andrew; LaMarca, Thomas; Ret, Herman
Subject: Terminal B South Sub

Dan,

There are two issues in the South Sub I would like to make you aware of. Please let me know the outcome.

- The emergency light fixtures do not work.
- The SB main has a loud buzzing sound either from the breaker or the transformer.

Peter Parfinik Jr
Newark Liberty International Airport
O 973-961-6521
C 917-299-8374
F 973-961-6080

Ret, Herman

From: Ret, Herman
Sent: Wednesday, June 29, 2011 11:26 AM
To: Johnson, Caesar; Simeonidis, Nicholas
Cc: Heitmann, James; Radics, Frank
Subject: FW: Terminal B - NB Switchgear Corrosion
Attachments: Site Investigation-6-14-11.docx

- This gear was completely broken down and cleaned several months ago. If it was subjected to moisture would it show signs of corrosion so quickly?
- The contractor is responsible to protect the equipment until final acceptance. If corrosion is the result of the atmosphere the contractor should have taken steps to protect the gear.
- Not all the joints were Cool-amp coated. Are we to expect problems with the unprotected joints?
- There has never been any issues with the switch boards (B2, etc) only with the switch gear, (NB, etc).

It appears that despite all the time and effort that has gone into trying to mitigate the problems with this switchgear we uncover more issues every time we look. One can only wonder what problems we will have in the future. In my mind the integrity of this installation is suspect at best.

From: Rothman, Paul
Sent: Thursday, June 23, 2011 9:37 AM
To: Lochard, Daniel
Cc: McConkey, John; Haldipur, Ajit; Berty, Sherry; Nunez, Daniel
Subject: RE: Terminal B - NB Switchgear Corrosion

Daniel

Based on the conditions observed during my site visit on June 14 (report, photos attached), and information provided below, it is my opinion that the corrosion of the bus bars was the result of moisture/condensation due to exposure to outside air and lack of a totally controlled atmosphere. The corrosion observed on June 14 appears insignificant in terms of operation of the switchgear, provided that the following conditions hold:

1. That the equipment is maintained in a stable, dry environment- outside doors must remain closed and heaters must be energized.
2. That the *Cool-Amp Conducto Lube* recommended by Siemens was applied in accordance with manufacturer's recommendations and is providing a uniform coating on the contact surfaces between the bus bars at the joints.

Regards,

Paul S. Rothman, P.E.
THE PORT AUTHORITY OF NY & NJ
Principal Corrosion/O&M Manuals Engineer
Engineering/Architecture Design Division
Engineering Department
Two Gateway Center- 16SW

Newark, NJ 07102
(973) 792-4456
Fax:(973) 792-4302
E-mail: prothman@panynj.gov

From: Lochard, Daniel
Sent: Wednesday, June 22, 2011 10:39 AM
To: Rothman, Paul
Cc: McConkey, John; Haldipur, Ajit; Berty, Sherry; Nunez, Daniel
Subject: RE: Terminal B - NB Switchgear Corrosion

Good morning Paul,

Here are the answers to your questions that are stated below.

1. The length of the time the equipment was in storage and the atmosphere that the equipment was exposed to during that time.
The equipment was in storage at Supor and Son storage, in Kearny, NJ for approximately 9 months. We paid a visit to the warehouse in June 2010. It had heaters and AC units. But, it also had large roll-up doors that were left wide open on that day.
2. The procedures used for cleaning the equipment, as mentioned in Herman's e-mail. (Were any cleaning solvents or other chemicals used?)
As per Siemens' recommendation, in the August 26, 2010 Recertification Agreement, the bus bars were cleaned with isopropyl alcohol.
As per the same agreement, Cool-Amp *Conducto Lube* was used to resurface the bus bars, at the joints. See attached product data for Cool-Amp *Conducto Lube*.
3. Where were each of these respective cabinets stored prior to installation?
When the cabinets left Supor and Son storage, they were stored in front of the North and South Switchgear Rooms, in Terminal B.
4. The only other question I have is the atmosphere in the crawl space beneath the Switchgear NB cabinets. If the conduits entering the cabinets at the bottom are not completely sealed, is anything of a corrosive nature able to enter the cabinets?
The crawlspace contains electrical conduits and plumbing pipes (chilled water, steam, drain lines, hot water and cold water).

If there are any questions, feel free to reach me at (973) 622-0800 X 212.

Daniel

From: Rothman, Paul
Sent: Wednesday, June 22, 2011 9:04 AM
To: Haldipur, Ajit; Lochard, Daniel
Cc: McConkey, John
Subject: RE: Terminal B - NB Switchgear Corrosion

No, I have not gotten any responses to the original two questions. I would like to expand on the first question, to try to understand the differences between the conditions observed on the Switchgear NB bus bars and on the Switchboard B2 bus bars. Where were each of these respective cabinets stored prior to installation? The only other question I have is the atmosphere in the crawl space beneath the Switchgear NB cabinets. If the conduits entering the cabinets at the bottom are not completely sealed, is anything of a corrosive nature able to enter the cabinets?

The intended approach is to verify that the conditions that caused the observed corrosion of the bus bars was a one-time scenario, and once operation of the equipment commences, and the enclosures are kept heated and free of moisture, not further corrosion should occur.

Paul S. Rothman, P.E.

THE PORT AUTHORITY OF NY & NJ
Principal Corrosion/O&M Manuals Engineer
Engineering/Architecture Design Division
Engineering Department
Two Gateway Center- 16SW
Newark, NJ 07102
(973) 792-4456
Fax:(973) 792-4302
E-mail: prothman@panynj.gov

From: Haldipur, Ajit
Sent: Wednesday, June 22, 2011 8:16 AM
To: Lochard, Daniel; Rothman, Paul
Subject: RE: Terminal B - NB Switchgear Corrosion

Dan:

Not clear if Sherry was able to respond to Paul (verbally or otherwise) to the following, considering Chip's being recalcitrant

5. The length of the time the equipment was in storage and the atmosphere that the equipment was exposed to during that time.
6. The procedures used for cleaning the equipment, as mentioned in Herman's e-mail. (Were any cleaning solvents or other chemicals used?)

If you have the answers, please oblige. I forwarded all the previous emails and Lucius Pitkin report to Paul last week.

We did meet internally with our Chief to discuss Paul's initial reactions....Paul can confirm intended next steps.

Paul:

Dan's back, so you can contact him directly for any additional questions you may have.

Thanks,

Ajit

From: Lochard, Daniel
Sent: Wednesday, June 22, 2011 7:19 AM

To: Haldipur, Ajit
Cc: Berty, Sherry; Nunez, Daniel
Subject: FW: Terminal B - NB Switchgear Corrosion

Good morning Ajit,

Does Paul still have any questions on Switchgear NB?
Does he have any comments from the site visit?

Daniel

From: Berty, Sherry
Sent: Thursday, June 16, 2011 5:31 AM
To: Lochard, Daniel
Subject: FW: Terminal B - NB Switchgear Corrosion

Good morning Daniel,

Ajit and Paul came to the site on Tuesday afternoon, we went to the North Substation and took some pictures. Paul sent the below questions and I tried to get him answers from Chip but he was very hesitant to talk to me about anything related to the North Substation.

After the walk-thru Paul said that he will be compiling more questions and send them but I have not seen anything yet.

Thanks,
Sherry

From: Haldipur, Ajit
Sent: Monday, June 13, 2011 9:29 AM
To: Berty, Sherry
Cc: Rothman, Paul
Subject: FW: Terminal B - NB Switchgear Corrosion

Sherry:

Please respond to Paul's request best you can, so we can then proceed to organize a site visit.

Thanks,

Ajit

From: Rothman, Paul
Sent: Monday, June 13, 2011 8:02 AM
To: Mukherjee, Somnath
Cc: McConkey, John
Subject: RE: Terminal B - NB Switchgear Corrosion

Somnath

I will be able to inspect the switchgear, and I suggest a review of the conditions that led up to this condition:

7. The length of the time the equipment was in storage and the atmosphere that the equipment was exposed to during that time.
8. The procedures used for cleaning the equipment, as mentioned in Herman's e-mail. (Were any cleaning solvents or other chemicals used?)

Paul S. Rothman, P.E.

THE PORT AUTHORITY OF NY & NJ

Principal Corrosion/O&M Manuals Engineer

Engineering/Architecture Design Division

Engineering Department

Two Gateway Center- 16SW

Newark, NJ 07102

(973) 792-4456

Fax:(973) 792-4302

E-mail: prothman@panynj.gov

Ret, Herman

From: Mukherjee, Somnath
Sent: Friday, June 24, 2011 11:03 AM
To: Ret, Herman
Subject: FW: Terminal B - NB Switchgear Corrosion
Attachments: Site Investigation-6-14-11.docx

Herman,
 Regarding corrosion on switchgear NB, here is the observation by our corrosion expert.

Somnath

From: Rothman, Paul
Sent: Friday, June 24, 2011 10:24 AM
To: Mukherjee, Somnath
Subject: FW: Terminal B - NB Switchgear Corrosion

Somnath

Here is the email I sent to Daniel yesterday:

Paul

From: Rothman, Paul
Sent: Thursday, June 23, 2011 9:37 AM
To: Lochard, Daniel
Cc: McConkey, John; Haldipur, Ajit; Berty, Sherry; Nunez, Daniel
Subject: RE: Terminal B - NB Switchgear Corrosion

Daniel

Based on the conditions observed during my site visit on June 14 (report, photos attached), and information provided below, it is my opinion that the corrosion of the bus bars was the result of moisture/condensation due to exposure to outside air and lack of a totally controlled atmosphere. The corrosion observed on June 14 appears insignificant in terms of operation of the switchgear, provided that the following conditions hold:

1. That the equipment is maintained in a stable, dry environment- outside doors must remain closed and heaters must be energized.
2. That the *Cool-Amp Conducto Lube* recommended by Siemens was applied in accordance with manufacturer's recommendations and is providing a uniform coating on the contact surfaces between the bus bars at the joints.

Regards,

Paul S. Rothman, P.E.
THE PORT AUTHORITY OF NY & NJ
 Principal Corrosion/O&M Manuals Engineer
 Engineering/Architecture Design Division
 Engineering Department
 Two Gateway Center- 16SW
 Newark, NJ 07102
 (973) 792-4456

Fax:(973) 792-4302
 E-mail: prothman@panynj.gov

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Sent: Wednesday, June 22, 2011 10:39 AM
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Good morning Paul,

Here are the answers to your questions that are stated below.

1. The length of the time the equipment was in storage and the atmosphere that the equipment was exposed to during that time.
 The equipment was in storage at Supor and Son storage, in Kearny, NJ for approximately 9 months. We paid a visit to the warehouse in June 2010. It had heaters and AC units. But, it also had large roll-up doors that were left wide open on that day.
2. The procedures used for cleaning the equipment, as mentioned in Herman's e-mail. (Were any cleaning solvents or other chemicals used?)
 As per Siemens' recommendation, in the August 26, 2010 Recertification Agreement, the bus bars were cleaned with isopropyl alcohol.
 As per the same agreement, *Cool-Amp Conducto Lube* was used to resurface the bus bars, at the joints. See attached product data for *Cool-Amp Conducto Lube*.
3. Where were each of these respective cabinets stored prior to installation?
 When the cabinets left Supor and Son storage, they were stored in front of the North and South Switchgear Rooms, in Terminal B.
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 The crawlspace contains electrical conduits and plumbing pipes (chilled water, steam, drain lines, hot water and cold water).

If there are any questions, feel free to reach me at (973) 622-0800 X 212.

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bus bars. Where were each of these respective cabinets stored prior to installation? The only other question I have is the atmosphere in the crawl space beneath the Switchgear NB cabinets. If the conduits entering the cabinets at the bottom are not completely sealed, is anything of a corrosive nature able to enter the cabinets?

The intended approach is to verify that the conditions that caused the observed corrosion of the bus bars was a one-time scenario, and once operation of the equipment commences, and the enclosures are kept heated and free of moisture, not further corrosion should occur.

Paul S. Rothman, P.E.

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If you have the answers, please oblige. I forwarded all the previous emails and Lucius Pitkin report to Paul last week.

We did meet internally with our Chief to discuss Paul's initial reactions....Paul can confirm intended next steps.

Paul:

Dan's back, so you can contact him directly for any additional questions you may have.

Thanks,

Ajit

From: Lochard, Daniel
Sent: Wednesday, June 22, 2011 7:19 AM
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Cc: Berty, Sherry; Nunez, Daniel
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Good morning Ajit,

Does Paul still have any questions on Switchgear NB?
Does he have any comments from the site visit?

Daniel

From: Berty, Sherry
Sent: Thursday, June 16, 2011 5:31 AM
To: Lochard, Daniel
Subject: FW: Terminal B - NB Switchgear Corrosion

Good morning Daniel,
Ajit and Paul came to the site on Tuesday afternoon, we went to the North Substation and took some pictures. Paul sent the below questions and I tried to get him answers from Chip but he was very hesitant to talk to me about anything related to the North Substation.
After the walk-thru Paul said that he will be compiling more questions and send them but I have not seen anything yet.

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Sent: Monday, June 13, 2011 9:29 AM
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Sherry:

Please respond to Paul's request best you can, so we can then proceed to organize a site visit.

Thanks,

Ajit

From: Rothman, Paul
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THE PORT AUTHORITY OF NY & NJ

Principal Corrosion/O&M Manuals Engineer

Engineering/Architecture Design Division

Engineering Department

Two Gateway Center- 16SW

Newark, NJ 07102

(973) 792-4456

Fax:(973) 792-4302

E-mail: prothman@panynj.gov

Ret, Herman

From: Ret, Herman
Sent: Monday, June 06, 2011 5:26 PM
To: Heitmann, James; Radics, Frank
Subject: Terminal B - NB Switchgear Corrosion



TB NB Switchgear 6-2011 2.jpg TB NB Switchgear 6-2011 3.jpg TB NB Switchgear 6-2011 4.jpg TB NB Switchgear 6-2011.jpg

Attached are some pictures taken today of the green corrosion on the new switch gear NB. This gear was completely broken down and cleaned earlier this year. I just do not get a good feeling about this.

Herman Ret
Newark Liberty International Airport
973-961-6144

Ret, Herman

From: Lochard, Daniel
Sent: Monday, April 04, 2011 5:15 PM
To: Ret, Herman
Cc: Nunez, Daniel; Johnson, Caesar; Parfinik, Peter; Ballance, Joseph
Subject: FW: SA insp

Good afternoon Herman,

Can I meet with you and Peter tomorrow, so that he can show me the exact location of the green film?

I just inspected the bus bars behind section #2 of Switchgear SA.

I used an LED flashlight and a regular flashlight.

They show different hues at different angles.

At one angle, an entire galvanized support looks green.

I'd like to resolve this as soon as humanly possible.

We may have to cancel all proposed plans for a PSE&G shutdown, if this is not resolved soon.

Let me know.

Daniel,

From: Lochard, Daniel
Sent: Monday, April 04, 2011 10:43 AM
To: Ret, Herman
Cc: Radics, Frank; Wallace, Michael; Simeonidis, Nicholas; Parfinik, Peter; Ballance, Joseph; Heitmann, James; Johnson, Caesar; Nunez, Daniel
Subject: RE: SA insp

Good morning Herman,

The contractor has informed me that the green shade might be Cool Amp residue. He's not quite sure.

Cool Amp is the product that Siemens recommended for the re-plating of the bus bars.

I will also have the contractor expose at least 3 other locations where the galvanized steel meets the copper bus bars.

This should give us a better idea if there is some chemical reaction between the dis-similar metals.

Please advise if you or one of your Electrical Supervisors can be present.

We are going to the South Sub-station now.

Daniel

From: Ret, Herman
Sent: Monday, April 04, 2011 8:21 AM
To: Heitmann, James
Cc: Radics, Frank; Wallace, Michael; Simeonidis, Nicholas; Parfinik, Peter; Ballance, Joseph; Lochard, Daniel; Ret, Herman
Subject: RE: SA insp

I gave this some more thought and I am concerned with proceeding with the installation of this equipment. This gear was recently completely torn down, inspected, re-plated as needed, re-inspected and re-tested. Yet within months we are now finding signs of corrosion. In addition due to the location of this corrosion it appears we may have an issue with dissimilar metal, where galvanized metal comes in contact with the bus work.

From: Ret, Herman
Sent: Thursday, March 31, 2011 4:35 PM
To: Lochard, Daniel
Cc: Heitmann, James; Radics, Frank; Wallace, Michael; Simeonidis, Nicholas; Parfinik, Peter; Ballance, Joseph
Subject: FW: SA insp

We noticed a small amount of green corrosion on the switch gear bus we inspected today in the south substation

From: Parfinik, Peter
Sent: Thursday, March 31, 2011 3:47 PM
To: Ret, Herman
Subject: SA insp

<< File: DSCF0552.JPG >>

Ret, Herman

From: Lochard, Daniel
Sent: Monday, April 04, 2011 10:43 AM
To: Ret, Herman
Cc: Radics, Frank; Wallace, Michael; Simeonidis, Nicholas; Parfinik, Peter; Ballance, Joseph; Heitmann, James; Johnson, Caesar; Nunez, Daniel
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DSCF0552.JPG

Ret, Herman

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To: Lochard, Daniel
Cc: Heitmann, James; Radics, Frank; Wallace, Michael; Simeonidis, Nicholas; Parfinik, Peter; Ballance, Joseph
Subject: FW: SA insp

We noticed a small amount of green corrosion on the switch gear bus we inspected today in the south substation

From: Parfinik, Peter
Sent: Thursday, March 31, 2011 3:47 PM
To: Ret, Herman
Subject: SA insp



DSCF0554.JPG



DSCF0552.JPG

Ret, Herman

From: Eric_Williams@URSCorp.com
Sent: Tuesday, March 15, 2011 2:18 PM
To: Wallace, Michael
Cc: Haldipur, Ajit; Hegarty, Brian; Johnson, Caesar; Lochard, Daniel; Nunez, Daniel; Radics, Frank; Ret, Herman; Heitmann, James; Rakhlin, Michael; Simeonidis, Nicholas; Mukherjee, Somnath; Pat_Spina@URSCorp.com; Michael_Collins@URSCorp.com
Subject: Re: Fw: EWR-264.003, Switchgear SA Test Reports
Attachments: DOC110304.pdf; Switchgear SA Retest Submittal Memo.docx

We have reviewed the attached responses of VRH, SM and Siemens regarding the resistance test values of Switchgear SA and offer the following:

1. The switchgear drawing, provided by Scott Testing, detailing the test points along the switchgear bus to which the various test reports used to obtain resistance readings was very helpful in understanding the different resistance values recorded by the associated testing reports.
2. The matrix indicating the data obtained from the various tests, at the test points, was also helpful.
3. Based on the matrix, where there were common test points amongst the four (4) testing reports, the resistance values were close to one another. Sometimes, the resistance values recorded by the last test, performed by Scott Testing, were lower.
4. Scott Testing's letter and SM's letter explained that because there was no consistency in the bus points to use for testing resistance, current used to perform the test and testing equipment, a side-by-side comparison of the multiple test reports is difficult to perform. However, each test report values obtained from the tests were acceptable. Although our review did not question the validity of the test results, the different values compared to the previous tests was questioned. The Scott Testing Report appeared to produce higher resistance values. Since Switchgear SA experienced the bus discoloration, our concern was with the apparent degradation of the overall performance of the switchgear. Based on the matrix, we **accept** the explanation provided by Scott testing regarding the different resistant values of the various test reports.
5. Our review of the Scott Testing report also questioned the increase in time for the LT Delay of circuit breakers DP-SA and DP-DB. This was not addressed in the responses provided by VRH, SM and Siemens.

Based our acceptance of the VRH, SM and Siemens explanation regarding the resistance values, we recommend the Scott Test Report submittal can be processed as "**Approved as Noted - Resubmit**". The report should be resubmitted with the corrections indicated in my memo to PANYNJ (see attached) and the letters from VRH, SM and Siemens regarding the resistance test values of Switchgear SA.

Please indicate if you concur and provide direction as to how you wish URS to proceed.

Thank you.

Eric C. Williams, PE
 Chief Electrical Engineer
 URS Corporation
 The Woolworth Building
 233 Broadway - Suite 2300
 New York, NY 10279-2399
 Tel. (212) 268-5030

Direct Line: (212) 946-8261
 Fax: (212) 268-5032
 E-Mail: eric_williams@urscorp.com
 web: <http://www.urscorp.com>

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"Wallace, Michael" <mcwallac@panynj.gov>

03/04/2011 11:10 AM

To "Rakhlin, Michael" <mrakhlin@panynj.gov>, "Haldipur, Ajit" <ahaldipur@panynj.gov>, "Mukherjee, Somnath" <smukheri@panynj.gov>, "Ret, Herman" <hret@panynj.gov>, <Eric.Williams@URScorp.com>

cc "Radics, Frank" <fradics@panynj.gov>, "Heitmann, James" <jheitmann@panynj.gov>, "Hegarty, Brian" <bhegarty@panynj.gov>, "Simeonidis, Nicholas" <nsimeonidis@panynj.gov>, "Johnson, Caesar" <cjohnson@panynj.gov>, "Lochard, Daniel" <dlochard@panynj.gov>, "Nunez, Daniel" <dnunez@panynj.gov>

Subject Fw: EWR-264.003, Switchgear SA Test Reports

Attached please find a response from VRH, SM and Siemens with regards to the resistance issue.

Please review and advise if their response is acceptable or if we should convene a meeting to finalize.

Michael C. Wallace, P.E. LEED AP
 Senior Resident Engineer-EWR-CTA. ---
 Sent from my BlackBerry Wireless Device

From: Palleija, Irene
To: Wallace, Michael
Sent: Fri Mar 04 09:13:23 2011
Subject: EWR-264.003, Switchgear SA Test Reports

<<DOC110304.pdf>>

Irene M. Palleija Colangelo

Contract Specialist

Construction Management Division, EWR

The Port Authority of New York & New Jersey

Newark Liberty International Airport

70 Brewster Road

Newark, NJ 07114

Tel: (973) 622-0800, Ext. 239

Fax:(973) 622-7222

Email: ipalleija@panynj.gov

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