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Details:

(FORM UPDATED: 07/12/2010)

**WISCONSIN STATE LEGISLATURE ...
PUBLIC HEARING - COMMITTEE RECORDS**

2007-08

(session year)

Senate

(Assembly, Senate or Joint)

**Committee on ... Commerce, Utilities and Rail
(SC-CUR)**

COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**
- Record of Comm. Proceedings ... **RCP**

INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt**
- Clearinghouse Rules ... **CRule**
- Hearing Records ... bills and resolutions
(**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
(**sb** = Senate Bill) (**sr** = Senate Resolution) (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**



DEAR SENATOR PLAKE ? SENATE COMMERCE, UTILITIES,
AND RAIL
COMMITTEE

March 3, 2008

Attached is the OSHA citation against Siemens and the Oregon Wind developer. It clearly shows a complete lack of health and safety concerns by the developers for US standards. There is no way Siemens could have not known about the OSHA requirements for safety lockouts and training. They have a safety and health professional on staff in Texas according to the citation. They made a conscious decision to not meet US safety standards when manufacturing and installing the turbines.

I respectfully submit this for the public record. Thank you.

Michael H Schneider
W 4652 Cty. H
Chilton WI 53014
920 849-2816

Oregon Department of Consumer and Business Services

Oregon Occupational Safety and Health Division (OR-OSHA)

1750 NW Naito Parkway Suite 112

Portland, OR 97209-2533

Phone: (503)229-5910



Citation and Notification of Penalty

To:
Randy H Zwin President
Siemens Power Generation Inc
CT Corporation System
388 State St Ste 420
Salem, OR 97301

Inspection Number: 311171847(12)
Inspection Date(s): 08/26/2007-02/07/2008
Issuance Date: 02/20/2008
Optional Rpt Num: Q2622-026-07
Employer ID No: 8495681-000

Inspection Site:
99436 Klondike Ln
Wasco, OR 97065

The violation(s) described in this Citation and Notification of Penalty is (are) alleged to have occurred on or about the day(s) the inspection was made unless otherwise indicated.

In the interest of assuring a safe and healthy workplace, the Oregon Occupational Safety and Health Division (OR-OSHA) conducted an inspection at a workplace under your control. During this inspection, violations of the Oregon Safe Employment Act and occupational health and/or safety rules were found.

This citation lists the violations and a date by which they must be corrected. If you are not able to correct the violations by the correction date, you must apply for an extension of the correction date by following the instructions outlined later in this citation. Oregon laws require that under certain conditions violations of occupational safety and health rules carry a civil penalty. If penalties have been assessed on this citation, they have been computed in conformity with Oregon Administrative Rules, Chapter 437, Division 1. If you want to appeal this citation, file your request for hearing within 30 calendar days as outlined on the reverse side of this page. If you choose not to appeal this citation, it becomes a final order 30 calendar days after receiving it. You must abate the violations referred to in this Citation by the dates listed, and pay the proposed penalties.

An effective Safety and Health program not only assures the correction of cited violations, it also requires actions to prevent violations from recurring. Through continued cooperation of employers, employees and OR-OSHA, a safe and healthful workplace for all Oregon employees can be achieved.

Michael D. Wood, Administrator
Oregon OSHA

PLEASE SEE REVERSE SIDE OF PAGE FOR IMPORTANT INFORMATION

Employer Discrimination Unlawful - The law prohibits discrimination by an employer against an employee for filing a complaint or for exercising any rights under this Act. An employee who believes that he/she has been discriminated against may file a complaint with the Bureau of Labor & Industries (BOLI) no later than 30 days after the discrimination occurred.

Notice to Employees - The law gives an employee or his/her representative the opportunity to object to any abatement date set for a violation if he/she believes the date is unreasonable. The objection letter must be mailed to OR-OSHA and postmarked within 90 calendar days of the receipt by the employer of this Citation and Notification of Penalty.

Adopting Federal Rules by Reference - Whenever federal rules have been adopted by reference, the federal rule number has been noted in the citation. If information is needed regarding the Oregon standard, contact the OR-OSHA field office addressed at the top of the first page of this citation.

Posting on the Internet - Federal OSHA publishes information on all inspections and citation activity on the Internet under the provisions of the Electronic Freedom of Information Act. The information related to your inspection will be available not sooner than 30 calendar days after the Citation Issuance Date. You are encouraged to review the information concerning your establishment at www.osha.gov. If you have any dispute with the accuracy of the information displayed, please contact this office.

If you would like to discuss this citation, call the OR-OSHA office in your area (all numbers are V/TDD):

Portland (503) 229-5910
Eugene (541) 686-7562

Salem (503) 378-3274
Bend (541) 388-6066

Medford (541) 776-6030

Oregon OSHA

Oregon Department of Consumer & Business Services

Inspection Number: 311171847

Inspection Dates: 08/26/2007-02/07/2008

Issuance Date: 02/20/2008



Citation and Notification of Penalty

Optional Rpt Num: Q2622-026-07

Company Name: Siemens Power Generation Inc

Inspection Site: 99436 Klondike Ln, Wasco, OR 97065

Citation 1 Item 1 Type of Violation: **Serious**

OAR 437-001-0760(1)(a): The employer did not see that workers were properly instructed and supervised in the safe operation of any machinery, tools, equipment, process, or practice which they were authorized to use or apply:

a) An OR-OSHA investigation into the wind turbine collapse that fatally injured one worker and resulted in serious injuries to a second worker on August 25, 2007, revealed the workers performing critical service in the hub of the turbine were entry-level technicians that were not being directly supervised at the time of the accident. The workers were unaware that failure to reopen three safety stop valves for blade pitch control in the hub after completing service work could result in catastrophic failure and collapse of the turbine.

THIS VIOLATION WAS COMPLIED WITH AT THE TIME OF INSPECTION.

Date By Which Violation Must be Abated:	10/30/2007
Proposed Penalty:	\$ 5000.00

See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Oregon OSHA

Oregon Department of Consumer & Business Services

Inspection Number: 311171847

Inspection Dates: 08/26/2007 - 02/07/2008

Issuance Date: 02/20/2008



Citation and Notification of Penalty

Optional Rpt Num: Q2622-026-07

Company Name: Siemens Power Generation Inc

Inspection Site: 99436 Klondike Ln, Wasco, OR 97065

The alleged violations below have been grouped because they involve similar or related hazards that may increase the potential for injury resulting from an accident.

Citation 1 Item 2a Type of Violation: **Serious**

29 CFR 1910.269(d)(2)(ii)(A): Where energy isolating devices were not capable of being locked out, the employers program did not use a tagout system:

a) The investigation revealed that procedures for energy isolation of the service valve and rotor lock pins in the Nacelle and safety stop valves on the hydraulic block for the blade pitch control in the hub were not required to be tagged out while performing service work.

THIS VIOLATION WAS COMPLIED WITH AT THE TIME OF INSPECTION.

Date By Which Violation Must be Abated:	10/30/2007
Proposed Penalty:	\$ 5000.00

Citation 1 Item 2b Type of Violation: **Serious**

29 CFR 1910.269(d)(2)(ii)(C): Whenever replacement or major repair, renovation, or modification of a machine or equipment was performed, and whenever new machines or equipment were installed, energy isolating devices for such machines or equipment were not designed to accept a lockout device:

a) Energy control devices within wind turbine W1, the blue service valve and the rotor lock pins in the Nacelle and the safety stop valves on the hydraulic block for blade pitch control in the hub were not designed to accept a lockout device.

Date By Which Violation Must be Abated:	03/22/2008
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See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Oregon OSHA

Oregon Department of Consumer & Business Services

Inspection Number: 311171847

Inspection Dates: 08/26/2007 - 02/07/2008

Issuance Date: 02/20/2008



Citation and Notification of Penalty

Optional Rpt Num: Q2622-026-07

Company Name: Siemens Power Generation Inc

Inspection Site: 99436 Klondike Ln, Wasco, OR 97065

Citation 1 Item 3 Type of Violation: **Serious**

29 CFR 1910.269(e)(2): Employees who entered enclosed spaces or who served as attendants were not trained in the hazards of enclosed space entry, in enclosed space entry procedures, and in enclosed space rescue procedures:

a) During the investigation, it was revealed that workers were not trained in enclosed space rescue procedures for entry into the hub of the wind turbines.

Date By Which Violation Must be Abated:	03/22/2008
Proposed Penalty:	\$ 500.00

TOTAL PROPOSED PENALTIES	\$ 10,500.00
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See pages 1 through 3 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Accident Synopsis
Siemens Power Generation, Inc.
Q2622-026-07

Energy Maintenance Service L.L.C.
Q2622-001-08

Page 1 of 17

INTRODUCTION

This is an after the fact narrative of the facts and circumstances as they relate to a wind turbine collapse seriously injuring William Trossen and fatally injuring Chadd Mitchell on August 25, 2007 while employed as Wind Technicians, William Trossen was under the employment of Energy Maintenance Service L.L.C. and Chadd Mitchell working for Siemens Power Generation, Inc. at the time of the accident.

OVERALL BUSINESS OF THE EMPLOYERS

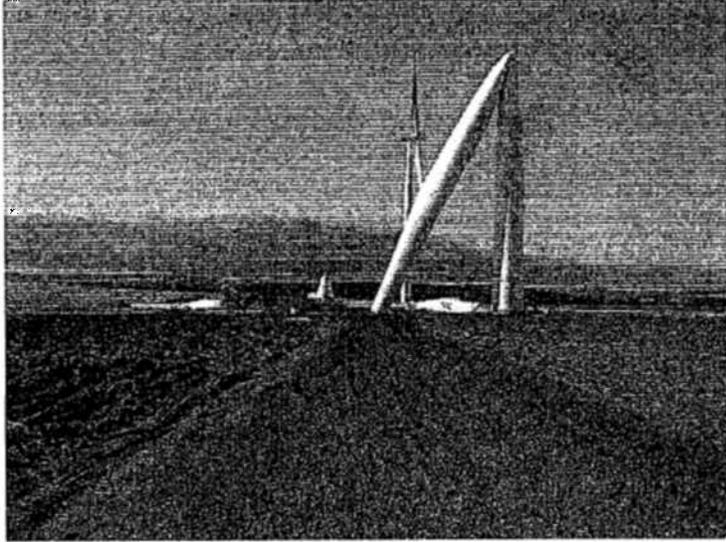
Siemens is a Denmark firm that designs and manufacturers wind turbine generators throughout the world. Originally, Bonus Energy bought into wind technology by purchasing the Westinghouse wind energy division to become Bonus/Westinghouse. Later the name changed to Siemens and finally the Westinghouse affiliation dropped. Their American headquarters is based out of Houston Texas. The site where the accident occurred is the Klondike III Wind Farm near Wasco Oregon. The wind farm covers several square miles on the hills above Wasco and includes over 200 generators from various manufacturers. PPM Energy is the owner/operator of the farm assuming ownership of turbines after initial installation and prescribed follow-up activities are completed by each manufacturer (estimated to be a 2 year period). Siemens Wasco operation began in April, 2007 with the installation of 44 of their third generation turbines. Construction activities were concluded in late June with follow-up cleaning, painting, and service work being performed at the time of the accident in preparation for releasing the turbines to PPM Energy ownership. Siemens' current operation at the farm employs approximately 7 workers out of an office/shop compound located ay 99436 Klondike Lane near the Siemens turbines.

Energy Maintenance Service LLC is a subcontractor to Siemens providing temporary labor services. At the time of the accident, employee, William Trossen was in the process of transferring from employment at Energy Maintenance Service LLC to employment for Siemens. Mr. Trossen was under the sole direction and supervision of Siemens Power Generation on the day of the accident.

SPECIFIC WORK BEING DONE AT THE TIME OF THE ACCIDENT

Chadd Mitchell, William Trossan and Dustin Ervin were assigned to perform maintenance work on wind turbine W1 using a 500 service checklist. Dustin had just completed loading a pickup truck with tools they had removed from the turbine to end the day. William was on his way down a fixed ladder inside the turbine tower and Chadd was in the Nacelle finishing service work when the turbine collapsed. Dustin called 911 and initiated an emergency response. Emergency responders confirmed that Chadd had received fatal injuries and found William

sitting on a ladder bracket some 20 feet up and inside of the top of the collapsed tower section. William was rescued from inside of the tower section with the assistance of Nick Martuscelli



who responded from his home in The Dalles. Nick then assisted in the removal of Chadd from the nacelle wreckage.

INSPECTION ACTIVITIES

August 25, 2007

The accident report was received through OERS by Sam Drill. CO Riffe was contacted and assigned to investigate.

August 26, 2007

CO Riffe arrived at the Siemens, Klondike Shop at approximately 6:30 am. An opening conference was held with Thomas Kyvsgaard, Nick Martuscelli, Beauford Bickerstaff, and Thomas Jessen-Jury. The CO was advised that Siemens began operation on this farm in April of 2007 constructing 44 of the 200 plus turbines on the farm. Thomas was brought in from Denmark before construction began as a technical advisor. The CO was advised that Nick Martuscelli was the service technicians direct supervisor. CO Riffe followed a company vehicle to a collapsed wind turbine site identified as Turbine W1. The accident site was photographed and a CD of the photos included in this report Dated 8/26/2007. Four pages of field notes were generated on graph paper dated 8/26/07. Of specific note during the site inspection Thomas Jessen-Jury advised the CO that the blades were not in the stopped position as would be expected during service.

The CO was advised that Siemens has a team of Engineers en-route from Denmark who are expected to arrive on Tuesday to help in analyzing the accident. CO Riffe was also advised that each turbine contains a data recorder that will be used in the analysis.

CO Riffe camped over night at the accident site. In the late afternoon Deputy Brian Hulke from the Sherman County Sheriff's Office arrived on the site. He advised that his department had responded to the scene on the day of the accident and confirmed the location of all involved. During the evening hours Michael Niemela from Phoenix Protection Services arrived on the site. He advised that his firm had been hired by Siemens to provide round-the-clock site security. He set-up barrier tape at the entrance to the accident site.

August 27, 2007

CO Riffe drove to the compound at approximately 7:30 AM. CO Riffe reviewed the Job Hazard Analysis Register for Klondike III Wind Farm, manual and was introduced to Dan Cannard, Les

Boette and Michael Revak who had flown in to assist in the Siemens investigation. An inspection of the accident site followed.

CO Riffe returned to the compound to conduct interviews. The first interview was with Thomas Jessen-Jury. Interviews were tape-recorded and the recording included in this report. Thomas has worked for Siemens in various locations around the world since November of 2000. He said that when he started they did not have entry classes before going to work. He said he was initially sent out to a site much like the Wasco site. He said after the first eight months they started sending him to various technical classes on the turbines. He has a four year degree in electro mechanics. He said that he has worked on some of their big projects in Norway. He said that he has been on the Klondike site since about a month before construction began. He said that the turbines are a new version with variable speed controls. He said he was sent here as a technical advisor. He said that the maintenance crew arrived about three weeks ago in July. He said they go through some basic training in Houston for two weeks before actually working at the site. Once on site they will work with him and get familiar with the turbines. He said that after about six months on the job they will begin specific training on turbine maintenance. He said their first work was the 500 hour service where everything gets checked and torqued one more time, oil gets changed along with painting and cleaning. He said that when the crew first started he worked with them all the time. They had performed one other 500 hour service the week before the accident and had been on W1 for about a day before the accident. He said that either he or Chris Barnes from the bighorn project were working with them. Thomas was not on site on the day of the accident. He understood they were to finish torquing the tower sections and finish minor tasks in the Nacelle. He said that he had discussed that work with the crew on Friday. He said that around 11:00 on Saturday Chadd called him and questioned him about a calibration check he was doing the hub. CO Riffe asked if they ever forgot to do anything before leaving the tower. He said that some people forget to take out the locking pins for the rotor. He said that when they get to the bottom and set the turbine back to normal operation, it won't go and they have to climb back up and remove the pins. He explained that the turbines normally operate on their own through a computer system. When they are going to work on them they reposition a switch in the base of the tower placing the turbine in service mode. In this position the mechanics can operate the turbine while in the Nacelle through a pendant control. He said that when he is done working in the Nacelle he usually releases the locking pins from the transmission and checks for proper operation before leaving the Nacelle. He was asked if the turbine could run too fast. He said that in operation mode the computer controls the speed and it will not allow over speeding. He said the normal maximum speed of the rotor is approximately 16 RPM under computer control. The discussion turned back to what the crew was doing when the accident occurred. He said that the entire crew had been down torquing bolts when Chadd went back up to the Nacelle to finish cleaning up. He said that Chadd lost his cell phone somewhere up there and had been looking for it. He said that apparently there was some phone # in the phone that Chadd needed before Sunday that was very important to him. He said that William said Chadd was argumentative when he came up to the Nacelle. He said that Chadd had been looking everywhere for his phone and William decided to help him by going through the tool bags again. He said that Chadd couldn't call the phone because his work phone was not working. He said he thinks Chadd went into the hub again because he knew he had been in there. Riffe asked if there was an inventory system to be sure they remove all tools when they leave the tower. Thomas said that they do not but that the workers do know what tools they have

with them. He was asked if leaving something in the hub could cause a problem. He said it could cause damage by beating around as the turbine turned but could not cause any type of catastrophic failure. He said that in the Nacelle there is no moving parts that are exposed, they are all covered. He said that Bill was the one who removed the pins after they worked in the hub and that he determined it was ready for operation, this was just before they took a lunch break.

The next interview was held with Nick Martuscelli. Nick is the site lead for the Siemens Klondike operation. He has worked for Siemens for the past month and a half. He worked on windmills before coming to Siemens at Florida Power and Light for approximately six years. He said that the first two weeks at Siemens he was sent to Houston for orientation training. His supervisor is Mikkel. He said that Thomas is the technical supervisor, the expert on the 2.3 turbine. Thomas works under him. He was asked if he worked with Chadd, Bill and Dustin. He said that he had never worked with Dustin because he just started on the site after his orientation on the day of the accident. He was asked if he ever performed the work Chadd, Bill and Dustin were performing. He said he had never done the 500 hour service but had been out doing some retrofits a couple of days before the accident. When questioned further he said the retrofits included changing faulty cabinet locks. He was asked if he got in the Nacelle's. He said whenever he gets a chance to. He said at his previous employment he was up in the towers when the 500 hour services were being performed but never got the chance to do it. He said he was on the job on the day of the accident but in the office. He said that he left the site at about 12:30 PM and was not present when the accident occurred. He said that at about 4:12 PM he received a call from Thomas that the tower had collapsed. He was asked if Saturday was a normal work day and said it was because they were trying to get the 500 hour services going. He said that the crew had completed the service on W2 and was working on W1 when the accident occurred. He thought it took about 7 days to complete the 500 hour service on one machine. He was asked what procedures would be used to go in the hub. He said you would "rabbit ear" the blades setting one at 10 o'clock, one at 2 o'clock and the other at 6 o'clock to line up the hub hole with access ports in the Nacelle using a motor that is dropped down onto a gear in the transmission. Once lined up two pins are put into holes in the brake disk to lock the rotor from movement. He was asked if the hub had any potentially toxic atmospheres. He said they use a hub permit system. They take a meter in the Nacelle and put it in the hub to test the air before entry. He was asked if he talked to them on the day of the accident. He said he had a safety meeting that morning. He said the crew goes through the JHA's for the tasks they will be performing during this session. He was asked if they had communication between each other on the job. He said they carry two way radios and they also have cell phones. He was asked if he had ever seen anything major like the accident before. He said no. He was asked if they could get overspeed. He said that the computer would not allow it. The blades would pitch back to 86 degrees to slow them. He described the 500 hour service as in a break-in service for a new lawn mower. They touch-up any surfaces that may have been overlooked during construction, check for proper alignment of equipment, noises, etc. and perform any retrofits that may be ordered by the manufacturer. Riffe began to question Nick about a hydraulic control lever when Nick said there was one there but that he had never done it. Mikkel then said that Nick was not hired to be in the turbines. He said that Nick was hired to be a site lead. He said that means he is to be a support for the operation, get tools that they need, gets parts that they need. He said that he reports to Houston. He said Nick is responsible for all the schedules, makes sure the warehouse is where it is suppose to be. He said that Thomas is Nick's right hand. He said if the technicians need

support he will send Thomas out. He said that Nick had just been in turbines because he is interested in it but it is not his task to be out (in the turbines). Then Nick responded that is why whenever he has time he will go out and be with them, see what they are doing, see if they need any help, he helps to see if there is an easier way. Riffe then asked if they had any tool losses. He said not on this site. He was asked if they ever experienced theft or vandalism on the site and he said no. Nick was asked if he had any idea as to what happened and he said no.

CO Riffe drove to the residence of William Trossen in The Dalles at approximately 5:00 PM. An interview was conducted with Dustin Erwin and William Trossen. At the request of the workers Dan Cannard, Thomas Jessen-Jury, Technical Supervisor, David Coleberg, EAP Rep for Siemens and Seth Nicholson, wind technician were present during the interview. The interview was tape-recorded and the recording included in this report. William Trossen reports being an intern at Siemens. He said he went to trade school as a young man in the electrical trade. He said he worked at that for six years before becoming a specialty cabinet maker. He said that in the mid 70's he heard about wind generation and always wanted to get involved. He said that after 25 years in the cabinet making trade he noticed a course in wind technology and signed up at Minnesota West Community college. He said that a nearby firm, Energy Maintenance LLC employs a lot of the students on an intern basis after their first year in the program. He said that through Energy Maintenance Services he was hired at the Klondike site on June 10, 2007 to work on the construction process. He said he has applied for a full time job with Siemens as an operation and maintenance service technician. Dustin Erwin reports going to a community college in The Dalles from January through May of 2007 receiving a certificate in wind technology. He said that he then went to work for Energy Maintenance Services on or about May 12, 2007 working on the site in the erection process. He said it was his first day on the job working for Siemens. He has no prior experience in wind turbines. They reported that they were performing a 500 hour service at the time of the accident. William said that he had only been doing the service work for seven days before the accident that before that he worked in inventory control for the erection phase. Dustin said that the work they did on the day of the accident included finishing the torquing of tower section bolts, a retrofit in the hub, a retrofit on one of the control cabinets, paint and clean up of the Nacelle and removal of tools for an upcoming inventory. Dustin said that he was assigned to "hub watch" while Chadd and William entered the hub. William said that the first task of the day was a grounding cable retrofit in the hub. He said he was going to perform that task. He said that they locked out the rotor and made everything safe before getting in the hub. He said that he got in the hub and had Dustin hand him the tools and paperwork for the retrofit. He said the process included drilling and tapping a bolt hole for the new ground strap. He said that the retrofit instruction sheet was not clear on where to drill the holes and after trying to figure it out he had Chadd come in to assist him. He said that Chadd had just gotten back from his initial training at Siemens and seemed to them to be the senior man on the crew. He said that neither of them could figure it out exactly where to drill the holes and decided not to perform the task until they got better instructions. Chadd then checked blade pitch calibration. William said that after Chadd performed the blade pitch calibration they removed their tools, got out of the hub and sealed it back up. He said that he then removed the lockout pins from the transmission. William then explained the lock-out procedures used for hub entry. They were asked how they knew they got all of the tools out upon leaving the hub. Dustin said they use a checklist to keep track of what they bring in and out of the towers. Dustin said that after that they ate lunch in the tower. He said that he had never done

torquing before and wanted to do that so they decided that after lunch he and William would go down below, to a lower level and began the torquing process and Chadd would stay in the Nacelle to do finish painting, clean-up work and a control panel retrofit. CO Riffe asked how retrofit assignments were made. Thomas said that they receive a notice from Houston with an ID # assigned. Parts are shipped in, matched with the retrofit paperwork and assigned as time permits or as they reasonably fit in the work schedule unless they are a priority. Thomas said that the work is assigned by Nick. Dustin said that in the morning of the accident when they arrived they were given the retrofits, and 500 hour service checklist during their morning safety briefing with Nick. Dustin said that they were still working on a routine for the 500 hour services. He said they were trying to start at the bottom of the towers and head up, then do the Nacelle work and on the way down, clean up and send a crew ahead to do the tower bolts. Thomas said that they have been at the 500 hour service for three weeks now. He said that they, with his help are trying to find their own routine. He said that he has his way of doing things, his own way of packing tools, and how he would start. He said that he tries to advise them but he wants them to find their own routine. He said that they have been doing really good in the last 1 and ½ week. They are great at organizing things. Riffe questioned them about how they do the work. William said that a tail board meeting starts at 10 minutes till 7:00 each day. They load the trucks with their tools and equipment and go out to the jobsite. On the day of the accident Dustin rode out with William and Chadd drove the other truck out. The remembered having lunch somewhere around noon. They were asked about the blade calibration. Dustin said that when they do the calibration they lock-out two blades so they won't move and check the calibration on the one that is not locked. Dustin said that each blade has a lock valve inside the hub. Riffe asked if they unlocked the blades when they left the hub. Dustin said that Chadd was the last one in the hub. He said that he would have had to check calibration on each blade. A discussion was held regarding what was done in blade calibration checks. Dustin said the blade is turned to the zero degree point (flat into the wind) and checked against an indicator mark on each blade. The neutral, or off position was described as approximately 85 degree blade pitch. Dustin said that after lunch he and William headed down to the bottom of the second tower section and began torquing bolts. He said Chadd was doing his thing on top. Dustin said that they finished the section when Chadd began to yell down to them about losing his cell phone. He said they continued Torquing another section until William decided to go up and help Chadd find his cell phone. Dustin said that he picked up the tools and went down below to wait for them to lower tools down from the Nacelle by the crane. William said the tools were the main reason they were working that day. He said that they had a tool man that was coming into the shop to do a final inventory of tools and parts so they wanted to get them down from the tower and back to the compound for the inventory. William said that after Dustin went down and he lowered the tools to him he went back up into the Nacelle with Chadd. He said that he helped Chadd look for his cell phone for a little bit and it was getting late. He said that he told Chadd his cell phone was probably in the bags. He said that Chadd had been looking in the tool bags. William said that he told Chadd that they would pull all the bags out when they got back to the compound and find his phone. He said that if they didn't find them they would come back up again next week to finish painting and they could find it then. He said that he then repacked the bags and sent them down while he thinks Chadd finished the cleaning. He said he brought the crane up after the last bag, put it to bed, closed the hatches, turned some of the hydraulic system off, locked the hatches, made sure all the electrical cords were put away then came up to the front and talked to Chadd. He said that is when they decided they had one more task to do and it

was to change the fiber optic cards. He said there are two up tower and two down tower so they decided that Chadd was going to do the two up tower and he was going to do the two down tower. He said he then went down to the yaw deck and put on his harness and hard hat and headed down. He said that he got down to 15 steps when the shit hit the fan. He said he thought it sounded like one of the blades struck the tower. He said that before coming to Klondike he worked two weeks down in Minnesota that had two run away turbines that were right next to each other and ran away within two months of each other. He said he saw them and saw the results of the blades hitting the tower so what he heard he was sure was the sound of blades striking the tower. He said he was inside the tower so he didn't see anything. He said he heard a huge bang, pop, and boom. He said that he then thinks he saw the tower collapsing and then doesn't remember anything until waking up perched on a bracket 20 feet above the ground. Dustin said that William called him at about 3:50 to 3:55 on his cell phone and said that they would be down in a few minutes. He said that he got in the truck, started it and got the air conditioner running. He said that is when he heard something crazy and thought why in the hell are they doing a high speed test. He said he looked out and saw the blades going past his truck, the rotor and blades were detached. He said he could see the tower section begin to bend and put the truck in gear and floored it. He said he could see the tower section hit the ground behind the truck in his rear view mirror. He said he put the truck in park and called 911. He said he freaked out until everyone started showing up. Riffe asked if they do high speed testing. Thomas said that the computer had an over speed guard that will slow the turbine in the event of an over speed.

CO Riffe returned to the accident site and camped over night.

August 28, 2007

CO Riffe returned to the Siemens compound at approximately 8:00 AM. Engineers from Denmark had arrived on the site and they were introduced. A plan was generated to remove the data recorder from the tower. Accompanied by CO Riffe Engineer, Bo Birkemose removed the data recorded from the lower section of Tower W1. A photograph of the recorder was taken before removal and the identification information on the recorder documented on notepaper dated 8/28/07. The data recorder was taken back to the compound where it was connected to laptop computers. Bo began describing readings from the recorder starting at a time indicated in the data as 6:43 AM on the day of the accident. First Bo explained that the time listed on the data recorder was actually 1 hour less than actual local time. As he read the data the information was recorded by CO Riffe on notebook paper that is included in this report. Through the review it was established that between approximately 11:00 AM to 12:21 PM blades were pitched independently several times before being returned to a pitch of 80 degrees. The turbine then rotated freely in low speed coasting mode until being stopped at approximately 1:59 PM. At approximately 2:16 PM all three blades were pitched to minus degrees and left in that position. At approximately 3:59 PM the brake was released in what Bo described as a potentially dangerous situation. Bo explained that computer data is backed up by the recorder every 10 minutes. He said that the recording ended at 4:00 PM. He advised that the only other information after that time was that a tracking error occurred at 4:04 PM and that it looked like an attempt was being made to reset it when the data recorder lost power at 4:05 PM.

After the data analysis CO Riffe met with Dan Cannard and Les Boette and discussed the situation. CO Riffe was provided with a copy of a Siemens Tailboard Meeting Form DOC 2.29-US with Siemens "Permit to Work" form stapled to the back. Les advised that these were the forms completed by the technicians at their safety meeting on the morning of the accident. A records request was discussed at this time and Dan agreed to obtain the records.

September 20, 2007

A box of records were received in the PFO with a cover letter from Dan Cannard. Records provided included Employment applications, training records and hire dates for Chadd, William, Dustin and Seth. A specific note in the response letter said that training records for William Trossen were requested from Energy Maintenance Services LLC and provided to them that were also included in the records. The correspondence stated that Mr. Trossen was not an employee of Siemens at the time of the event.

Other records provided included the wind turbine service manual for the Klondike site, a job hazard analysis manual for the site, a copy of the blade retrofit procedure being performed by the crew, a copy of the OSHA 300 and 300A records and the Klondike site Safety and Health Manual.

September 21, 2007

After a review of the records an e-mail was sent to Dan Cannard requesting additional training records. A print of the request is included in this report dated September 21, 2007.

October 2, 2007

An opening conference was held with Energy Maintenance Services LLC via telephone with Gary Green in Gary SD. He advised that their company did provide labor services to several employers in the wind turbine industry. He advised that they had provided the training to William Trossen as outlined in the EMS Employee Training Record provided to the CO by Siemens. He was under the understanding that William was in the process of taking a job with Siemens on the Klondike site and that he was solely under the direction and control of Siemens when the accident occurred.

October 12, 2007

An additional box of records was received in the PFO in response to the second records request. Documents included the Siemens OMS phase Injury and Illness Prevention Program for Klondike III, Siemens electrical safety training program records (including a high voltage Electrical Safety Training manual), and a binder with the following documents: Section A: Basic Health and Safety Rules for service technicians working in Siemens Wind Power's turbines (51 pages) Section B: Siemens Site Induction Document PG-R (2 pages), Section C: blank, Section D: blank. Section E: A 37 page EMS Lock Out Tag Out training program outline and a 21 page EMS confined space training program outline.

October 30, 2007

CO Riffe returned to the site accompanied by CO Hodgson. Dan Cannard provided CO Riffe with a copy of an 18 page Siemens US Lockout/Tag-out – Field Procedure PRO 5.8 dated 09.10.07 and advised that it had been developed after the accident for work in the turbine. After a training session on fall protection an inspection of a wind turbine adjacent to W1 followed. The CO's were accompanied by Thomas and Seth during the inspection. The newly developed lockout/tag-out procedures were used and described during the inspection. Digital photos were taken by both CO's and a CD of the photos included in this report. Once in the hub, Thomas showed the CO three control valves that were used to stop mechanical movement of the blade pitch assembly while workers were in the hub. Under the new procedures each valve was tagged-out after they were closed. These valves are shown in photos DSC03275, DSC03276, DSC03278 and DSC03279 dated October 30, 2007. Using a pendant controller Thomas demonstrated the movement of each blade after removing the tag and opening each valve. He said that, after the accident, engineers revised the computer programs so that only one blade at a time can be pitched to less than a 60 degree angle and then demonstrated by moving one blade to 0 degree and attempting to move a second blade. The pendant computer control did stop the second blade movement at 60 degrees. After inspecting the active turbine the group returned to the accident site. CO Riffe entered the hub of the wreckage verified that all three blade pitch valves were in the closed position (see photos DSC03290, DSC03291, DSC03292 and DSC03293 dated 10/30/07).

A re-interview was conducted with Nick Martuscelli. The interview was tape-recorded and the recording included in this report. Nick was asked who supervised him. He said that he has an area manager in Houston. He is not directly supervised on-site. He was asked if he supervised Thomas. He said that he did. He said that Thomas was his lead technician on the site on the technical side. Nick supervises all other Siemens employees at the site. Riffe asked Nick how long Chadd had been on site before the accident. Nick said they both were hired at the same time. Riffe questioned Nick about technician levels. He was unsure of any specific tech levels but said that Chadd would be considered a beginner. He did say that the company is now establishing various technician levels. Riffe asked if the turbines he worked on at Florida Power and light were the same as what is on the Klondike site and he said they were. Nick was asked if Chadd had any previous experience in turbines and he said that Chadd did not, that he had worked in a hospital before coming to Siemens. Nick said that after being hired on July 6, 2007 they were sent to Houston for a two week training before coming to the site to start doing 500 hour services. He said that is not all they did, that they also responded when turbines were down and did retrofits. He was asked if he had ever done the retrofit for the new ground strap in the blades and he said that he had not. He was asked about Bill's background and said that Bill went to college to study wind technology and he thought he had been there for a year. He said that Bill then got a job with EMS and came out to Klondike to help with the project. He said he had been there a month or so. He was asked about Bill's training and he said that he had the basic training from EMS and was getting on-the-job training at the time of the accident. Riffe asked if Bill would have been under the direction and control of Siemens at the time of the accident and Nick said that he was working for Siemens. Riffe asked if Bill had any training in hub entry. He said that he had done it during construction while working for EMS. He was asked if he knew what training EMS provided and he said he did not. Riffe then asked about Dustin's

background. Nick said that Dustin went to college in wind technology. He was not sure if he finished the program or how long he had been doing it. He said that Dustin came out to the site during construction through EMS. Riffe asked if Nick would consider Chadd, Dustin and William entry level tech's and he said that he would. Riffe asked if he was the senior tech on the site and he said that Thomas was and that he was the site lead. Riffe then showed Nick the tailgate meeting form dated 8/25/07 and asked if he completed the form. He said that he was involved with it but that he did not complete it. He said he was sitting at his desk and the employees were sitting out in the common area and they were having a discussion. Riffe asked what the form was for. Nick it was like a risk assessment. Riffe asked about Seth's training. Nick said they were all hired on the same day, Seth, Chris, Chadd and himself. He was asked if he knew how long Thomas had been on site and said that he thought he had been there during construction. Riffe then asked how often the tailboard meeting forms were completed. Nick said every day. Riffe asked who had signed the form and Nick said Dustin, Bill and Chadd. Riffe asked about Seth and Nick said he was not working that day, that he had asked Bill to come in because Seth wasn't going to be there. Riffe asked if checking the blade angle was part of the work to be done. He said that it was on the 500 hour service checklist so he may do it while they are in there. Nick described the 500 hour checklist as a maintenance checklist for all the work that needs to be done during the 500 hour service. He said that before the service is complete all items must be checked off. He said that if something were needed in the hub then they would go ahead and do it while in there. Riffe then asked what time the tailboard safety meeting was held. Nick said at 7:30 am. Riffe asked if Nick intended to be there on that day. Nick said, no, that he came in because he woke up and decided to come in because of a switchover they were doing and left the site before the accident occurred. Riffe then said that the work the crew was doing was then, work that was to be done without his involvement, Nick said yes. Riffe then asked about the section on the form checked for confined space entry. Nick said that if they are going in the hub then it is a confined space and they will check that section on the form. He was asked if it was a permit required confined space and said that it was. Riffe then turned to the second page of the tailboard form and asked if that was the permit. Nick said that it was. He said he did not specifically recall the permit but agreed it was his initials under Name of Authorizing Person. When questioned about not having a permit number Nick showed the CO's a log of assigned confined space permit numbers and admitted that it should have been numbered. Riffe asked if the crew had done hub entry before and Nick said that they had but that the forms were all new. He said going in the hub had been done using an O2 sensor. When questioned if the training they received included the forms he said it did not, that the forms were in the safety book and he started using them. He was asked what precautions are taken for hub entry. Nick said that they hang an O2 sensor in the space for a few minutes before entering. He said that the site safety officer had showed them how to do it. He was asked if they had confined space training as part of their basic training in Houston and he said it was not, that the training in Houston basically involved watching videos on the subject. Riffe asked if they had any training on how to get someone out of the hub in the event of an accident and he said that they had none but that they did have a harness in the nacelle for lifting someone and were told about it. Riffe asked who of the three working that day would have been in charge. Nick said it would have been Chadd. He was asked if they ever practiced rescuing someone from the hub and said they had not, that they did practice getting someone off from the ladder during their basic training. Riffe asked if he had looked at the blade ground strap retrofit instructions and he said he had. Riffe asked if they looked straightforward and he said they did, on paper. He said that they know

it is never that easy but that they look over the sheet and decide what tools they will need. Riffe asked if he gave any other instruction to the crew in addition to what was in the document. He said that he told them to check to see they had the tools they needed. He said he and Chadd went through the work instructions with them in the shop. He was asked when he left the site. He said he left at about noon. He was asked what he did during that time. He said he was in the office and early that day and Chadd came in and used the bathroom. He said he asked him to go to another location and reset a turbine that had stopped before he went back to W1. He said that at about 11:00 he called Chadd and told them he was leaving and asked if they needed anything. He said that Chadd then told him he was not going to be able to finish the ground strap retrofit. He said he told him to just abort it, finish what they were doing and get down. He said that Chadd told him they would be down by four. Riffe asked if Chadd was using a personal cell phone or a company phone. Nick said that Chadd was using his personal cell phone because something was wrong with his assigned company phone. He said that the day before the batteries died and would not hold a charge. Riffe questioned Nick about the check on the permit to work form next to Radio / Cell Phone Coverage. Nick said that Chadd and Dustin both had cell phones. He said they did carry radios but they operated through a repeater in one of the towers and the signal was hit or miss, so if you wanted to have a fluent conversation with someone without repeating yourself you would just get on a cell phone. He said that if you are in the tower the radio signal does not go through it. Riffe asked what was the next contact he made that day. He said it was from Thomas who was at the fairgrounds in Goldendale. He said he thought it was at like 4:04 pm and he told him the tower fell down. He said he tried to call Dustin to see what was going on so he called, Rob, in the warehouse who had been contracted with to get the warehouse parts inventory done, and asked him to go out and see what was going on. He said he told Rob he would be there as fast as he could. Riffe asked where he was at, at the time, and he said he was in the Dalles, at home. He said that Rob called him back and said that he had found Dustin and that he was ok but that he couldn't find Bill or Chadd. He said he drove to the crash site. He said when he arrived there were groups of people standing around, fire department, police, and just people. He said that he holler for Rob, no answer. He said some cop came up to him, asked him who he was. He said he told them who he was. He said he asked if they found anybody and they told him Bill was in the tower and the other guy was not doing so good. He said there was one guy at the bottom of the collapsed section where Bill was at. He said he assumed others would be taking care of Chadd so he went to help Bill. He said he went up to the guy and asked what was going on and the guy said, "I'm not going in there." He said that he then entered the wreckage and climbed up to where Bill was sitting on a ladder bracket. He said he then helped Bill get down. He was asked if they had emergency procedures to follow in the event of an accident and he said call 911, that is it. He was asked if they had ever worked with the fire department to develop rescue plans. He said they tried to get the fire department involved but had been unsuccessful with the local volunteer department. Riffe asked how Chadd was removed from the wreckage. He said that the fire department didn't want to do anything so he asked for some cable cutters and then cut the cables to the cabinet he was trapped under while Rob went back to the shop and got the forklift. He said they then used the forklift to get the equipment off from Chadd before fire and police personnel finally removed his body. Riffe then questioned the lockout procedures. He asked if there were any site-specific lockout procedures and Nick said that if there were he was not aware of them. Riffe asked if any actual lockout devices or tags required at the time of the accident and Nick said there were not. He was asked what training they had in the process. He said it was on-site through Thomas and others. He

was asked what knowledge they had about opening and closing the blade control valve in the hub. He said it was not a technical issue, opening and closing the valve. He said you don't want to leave it closed because you don't want to climb back up there. He said "This was never imagined, in a million years, that this could possibly ever happen so, it was always a joke, you get a bonus point if you leave it closed because the turbine would not operate if you left it closed." Essentially if you forgot to open it, you would be the one who would have to go back up and open it. Riffe asked if there were any rules or policies that allowed the closure of all three valves at the same time. He said there were not. Riffe asked if they were ever told that they could not lock all three blades in the minus 2 position and he said they had not. He said that he thought that the turbine would never release the brake if the blades were locked but that he had never tried it. He said that he and Chadd had talked the day before the accident about checking the blade pitch before leaving the hub.

October 31, 2007

The next interview was a re-interview of Thomas Jessen-Jury. The interview was tape-recorded and the recording included in this report. He was not on-site on the day of the accident. He was asked if he had any conversations with anyone on site on the day of the accident. He said that he got a phone call from Chadd at about 11:00 that morning. He said it was about a lubrication system check he was suppose to do and checking the pitch angle of the blades. He said that he was a bit surprised they were doing a pitch calibration because he thought it had already been done. He said he told him briefly how to do the calibration. He was questioned about what was required to do the process. He said that after entering the hub they would close all three blade pitch valves. He said you would then open the one you were going to check and, using the pendent control pitch the blade to the 0 position and check the actual pitch on a marker on each blade. CO Riffe asked who, of the crew on the job on the day of the accident was the most experienced. He said it was Dustin because he had been on the job the longest. He said Dustin was there during construction and as soon as he knew Dustin was going to be hired by Siemens he took him out and started training him on the maintenance. Riffe asked who would have been the lead worker. He said that due only to personality Chadd would have tried to be the lead. CO Riffe asked if anyone was aware of the potential that an accident such as this could have occurred, was there any issues with pitching all three blades at the same time. He said there was not. He said they were all trained how and when to use the controls but no one was aware of the hazard. Riffe asked if Nick was in charge and he (Thomas) was training them. He said yes. Riffe asked what changes had been made since the accident to prevent reoccurrence. Thomas said that first the computer programs had been changed so as to not allow all three blades to be pitched to the minus 2 position at the same time. He said you can pitch one blade to less than 60 degree but if you do the other two blades will not pitch past 60 degrees. He said they have changed their lockout/tagout procedure to include a specific procedure for the turbines and have added a checklist to be sure all items are covered. In addition they are now actually using padlocks to lock the rotor pins and service valve. Riffe asked Thomas if he knew who was working on the day of the accident. He said he did. He was asked if he had any concern about that and he said he did. He was asked to explain. He said that, on Friday when he found out that they were going to work that Saturday he told Nick that he was concerned about the lack of experience of the crew and lack of a need to work on Saturday. He said that he felt it could wait until Monday when he and Chris could be there. He said that Nick needed to get all the tools out

of the tower for an inventory and was going to go ahead and let them work. He said that Dustin was originally scheduled off on that day but he (Thomas) asked Dustin come in because he felt at least Dustin had some experience. Riffe asked if he knew they were going to go in the hub. He said he didn't. He was asked if that would have raised more of a concern for him. He said, no, that he was already concerned. He said that he knew Chadd forgot stuff. He said that he had talked to Nick about how he wanted the crews arranged. He said that he wanted Chris and Dustin to work together and Chadd and Seth to work as a team but that there were some personal issues with that. He said now they have changed their policies to require at least one of the employees climbing the tower to have product specific training before anyone is allowed to work. He said the person trained to that level must be the first one in the Nacelle and the last one to leave. Currently he is the only one on site trained to that level. Riffe asked him about the communication system. He said the company issues each technician a cell phone. He said that Chadd was having a problem with his company cell phone but did not know what phone he was using on the day of the accident. He was asked about the radio system and said that it did not work from all locations and thought it had something to do with the location of the repeater. He was asked if his phone conversation with Chadd at approx. 11:00 am on the day of the accident had anything to do with the hub work. He said it did not, that he thought they had agreed not to do that work until Monday when he could be there. He said that the next call was from Dustin at about 4:00 advising that the turbine had collapsed. He said he was in Goldendale at the fair and immediately called 911 because he was not sure if Dustin had. He said he called Nick and then tried to call everyone else as he drove to the site but got no answer. He said he called their Denmark center and had all Siemens turbines on the farm shut down.

The next interview was with Dustin Ervin. The interview was tape-recorded and the recording included in this report. He was asked who was in charge on the day of the accident. He said that nobody was really in charge but that Chadd had more service experience. He said that he had just got back from the basic training in Houston and that Chadd had been working on the 500 hour services while he was gone but that none of them were in charge. He said that he returned from Houston on Thursday and came in on Friday. He said that on Friday Nick told him he needed to work on Saturday because they needed to get the tools out of the tower for an inventory. He was asked if they went through a tailboard meeting on Saturday morning and said they did. He said he thinks Chadd filled out the form that day. CO Riffe pulled out the form and showed it to Dustin. He said, after looking at it that he actually wrote it and signed it. He was asked if they discussed the hub retrofit. He said not at that time, that when they got up in the Nacelle is when they started discussing who was going to do what. He did not go in the hub. He said Bill and Chadd did that. He was asked if he had ever been told what to do if someone were to go down while in the hub. He said he had never had any actual training on that but knew that you were suppose to pull them out by the crane. He said he was only climb certified 2, which meant he could take somebody off from a ladder and down from the top of the Nacelle but that he had never done a hub rescue. He was asked when hub entry occurred on the day of the accident. He said that Bill and Chadd went in somewhere around 10:00 and that Chadd went back in to look for his cell phone sometime after lunch. When questioned about the reported second entry he said he did not see Bill reenter the hub, but understood that he had as a result of the investigation. He was asked if that would be unusual. He said that you are not suppose to go in the hub by yourself but that it was not enforced at that time. He was asked if, before the accident, he was aware of any hazards involved in pitching the blades. He said he was aware

that you are required to open the valves before you leave the hub and that all blades locked in the zero position could cause a runaway. He said that the biggest thing they understood would be that if you didn't open the valves you would have to do a re-climb. He said you should know by looking at the pendent control what position the blades were in before you leave the Nacelle. He said that he always checks everything by going through the menu's on the pendent control, to be sure there are no errors before leaving the Nacelle so he doesn't have to do a re-climb. Riffe asked about the communication system on the day of the accident. He said that they were the only ones on site except "tool man Rob". He said they all had cell phones. He was asked if they were company cell phones or personal. He said he thought he was using his own and that Chadd was using his own because that is why he was freaked out because he needed some numbers off from it because of a position he was going for at the hospital union. Riffe asked why they weren't using radios and he said that the system is not reliable. He said it worked fine during construction but when they moved the repeater from the PPM Complex to one of the towers the system has not worked very well. He said he started working on the site for a subcontractor during the construction phase. When they found out he was able to trouble shoot the systems he did that for about a month to a month and a half before being hired by Siemens on August 10, 2007 and going to orientation in Houston. He was asked if locks or tags were used before the accident. He said only if you are doing electrical work but that locking out or tagging out hydraulic or mechanical systems was not required. He said that Chadd and Bill worked in the hub on the day of the accident. He said that Bill tried to perform some sort of retrofit but was unsure how to do it so Chadd came in to help. After a little while they were both unsure of the procedure so they decided not to do it. He said that Chadd had some calibration work to do and finished that before they both came out of the hub and sealed it up just before lunch. He said that after lunch he and Bill decided to finish torquing the tower sections and Bill stayed in the Nacelle to finish painting and a simple cabinet retrofit. He said that he and Bill were down torquing when Chadd started looking for his cell phone. He said that Chadd came down the ladder yelling to them to call his cell phone to help him find it and went back up into the Nacelle. He said that they called it for 5 or 10 minutes constantly until it went dead. He said that Chadd was up in the Nacelle for another ½ hour to 45 minutes before coming down to them and told them he was unable to find it. He said that Chadd then stormed back up the tower. He said that after finishing their work he went down to pick up tools and Bill went back up to the Nacelle to help Chadd. He said that about five minutes before the accident Bill called him on the cell phone and told him he was heading down. He is supervised by Nick.

CONCLUSION

Based upon the data from the data recorder recovered from the wreckage of wind turbine W1 and co-worker interviews Chadd Mitchell re-entered the hub, placed all three blades in a minus two position and closed the valves that allowed automatic computer control of the blades at approximately 2:16 PM. At approximately 4:00 PM Chadd released the service brake. With blades pitched and locked in the minus 2 degree position wind energy created an over-speed condition resulting in catastrophic failure and collapse of the turbine.

FINDINGS AND JUSTIFICATION

1. The employer did not see that workers were properly instructed and supervised in the safe operation of any machinery, tools, equipment, process or practice which they were authorized to use or apply in violation of OAR437-001-0760(1)

a) Chadd Mitchell with less than 2 months experience and William Trossen with less than 2 months experience were authorized by the site supervisor with less than 2 months experience in turbine service work to enter and work in the hub of wind turbine W1 without specific lockout/tag-out procedures for the control of hazardous energy.

b) Inadequate supervision of an inexperienced worker who failed to restore safety stop taps on the hydraulic block in the hub resulting in catastrophic failure of the wind turbine on August 25, 2007.

c) Employees were unaware of the catastrophic failure potential hazard created by failure to restore the safety stop taps on the hydraulic block in the hub.

2. Procedures for the control of hazardous energy for energy isolation devices not capable of being locked out did not include a tag-out system in violation of 1910.269(d)(ii)(A)

a) Procedures did not include tagging of safety stop taps on the hydraulic block in the hub that were not capable of being locked out.

b) Procedures did not include application of a tag-out device on the rotor lock pins that were not capable of being locked out.

c) Procedures did not include application of a tag-out device for the "Blue Valve" (service Valve) in the Nacelle.

3. Energy isolation devices on new machines or equipment installed after November 1, 1994 were not designed to accept a lockout device in violation of 1910.269(d)(2)(ii)(C):

a) The "Blue Valve" (service brake) in the Nacelle was not designed to accept a lockout device.

b) Safety stop taps on the hydraulic block in the hub were not designed to accept a lockout device.

c) Lock pins for the rotor lock were not designed to accept a lockout device.

d) The wind turbines were new machines installed between April and July 2007.

4. Employees who enter confined spaces and attendants were not trained in enclosed space rescue procedures in violation of 1910.269(e)(2):

- a) Employees in working in the hub and the attendant in the Nacelle were not trained in enclosed space rescue procedures.

VICTIM(S) AND OTHERS INVOLVED

A) Victim(s)

1. Chadd B. Mitchell, Wind Tech FATALLY INJURED
917 Pipeline Rd.
Golden Dale, WA 98620
Phone: 509.773.5827
2. William J. Trossen, Wind Tech SERIOUS INJURIES
1312 Trevitt # J
The Dalles, OR 97058
Phone: 507.829.0610

Others

1. Dustin Erwin, Wind Tech
6412 Cherry Heights Rd.
The Dalles, Or 97058
Phone: 541.340.9887
2. Thomas W Jessen-Jury, Technical Supervisor
2605 E 14th St.
The Dalles, Or 97058
Phone 541.370.2655
3. Nick Martuscelli, Service Site Lead Technician
1306 E 16th St.
The Dalles, OR 97058
Phone: 541.296.2322
4. Mikkel Maehlisen, Wind Power Area Manager Group Leader
Siemens Power Generation Inc.
16530 Peninsula Street Bldg 3
Houston TX 77015
Phone: 281.604.5229.
5. Seth Nicholson, Wind Tech
1006 Chenowith Loop
The Dalles, OR 97058
Phone: 503
6. Beauford Bickerstaff, EHS Specialist

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Orlando, FL 32826-2399
Phone: 407.736.2482
8. Les Boette, ESH Wind Turbines
9. Brian Hulke, Deputy Sheriff
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