

# Richard J. Walters, Esquire

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Pittsburgh, PA 15224 Fax: (412) 361-0637 Pa Id No. 58789

March 20, 2015

Hon. Judge David A. Salapa  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, PA. 17120

Re: Shirley Surrec v. Columbia Gas of Pennsylvania, Inc.  
Complaint Docket No. C-2014-2408741

Please let this correspondence served as a letter of representation with regard to Ms. Shirley Surrec and her claim, and kindly note that I have entered my appearance on her behalf.

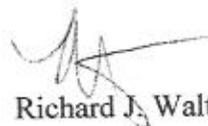
Please find the expert reports of Architect Peter J. Kreuthmeier from Loysen + Kreuthmeier Architects and Holly A. Hudson from Cosmos Technologies Inc.

Also please find the office note of Dr. Robert Gorby.

These results should indicate the serious nature of this element and the liability of Columbia Gas of Pennsylvania and its industries. I would like to offer these into evidence at the April 21<sup>st</sup> hearing, and now would like to reserve the rights to produce live testimony related to the same if possible.

Please feel free to contact me if you have any question regarding this matter.

Respectfully,



Richard J. Walters, Esquire

Cc: Shirley Surrec.

24 September 2014 Ms. Shirley Surrec  
 525 North 8th Street  
 Jeanette, PA 15644

Re: Surrec House

Dear Ms. Surrec:

At your request, we conducted a brief walk-through of your home on 20 September 2014 in order to determine the nature of your recent, within the last year, ongoing, and profound indoor humidity problems. As you explained to us, the onset of these problems coincides with the completion of weatherization upgrades by several groups working in concert. The consequences of these problems, also as you have explained to us, include: elevated dampness in furnishings and on interior surfaces, condensation on interior window glass, and staining and cracking of interior wall and ceiling surfaces. This has led to a chronic respiratory infection that requires you to use oxygen. We observed much of the construction-related evidence first-hand, as well as profound mold development in the basement.

We have enough information at this point to conclude that these weatherization upgrades, while well-intentioned, did not address other pre-existing building conditions and in fact, have exacerbated them. We also find that best practices in building science have not been strictly followed in the application of these weatherization upgrades. The combination of these factors is currently diminishing the habitability of this building and its suitability as a dwelling. This can be demonstrated. This can also be corrected, and must be, in order to provide a healthy indoor environment. Below, we outline relevant observations, conclusions, and recommendations for key areas of your home. First, a brief time line:

KAREN LOYSEN, AIA, PRINCIPAL  
 PETER KREUTHMEIER, PRINCIPAL

TEL 412.924.0006 FAX 412.924.0007  
 5115 PENN AVENUE PITTSBURGH, PA 15224  
 LK-ARCHITECTS.COM

### **Recommendations**

A permanent fix will require the removal of any remaining opportunities for water vapor infiltration. Until such time as that may occur, we recommend the following immediate steps:

- Immediately install a unit dehumidifier, plumbed directly to a drain. This will remove the food source for mold development. While the plumber is there, correct the leak at the kitchen waste line.
- Immediately perform microbial testing via a qualified testing agency in order to develop a third-party record. This architect, who is allergic to mold, can report that mold is indeed present and profound.
- Immediately remediate mold throughout the basement, including ductwork through to the first floor.
- Service the furnace/air conditioner, and insure that the condensate drainage system is working properly.
- Keep the door to the undercroft open, and add a circulating fan to promote air exchanges with the (dehumidifier-equipped) basement.

To permanently address the undercroft, it will either need to be contiguous with the outdoor environment and permanently sealed-off from the basement, with the shared wall treated as a foundation wall and the sump removed; or contiguous with the basement, insulated, and waterproofed. At present, it has a foot in two worlds, indoor and outdoor, with predictably disastrous results. In this case, our recommendation is to price the fix both ways, and to implement the more economical solution.

To permanently address the basement space, water vapor intrusion must be stopped. There are a number of commercially available solutions for this, including excavating the perimeter of the house and treating the outside of the foundation walls, or adding a wall drainage and insulation/finish system on the interior side of the basement walls. We prefer neither of these.

What we typically specify for existing construction such as this, and have effectively implemented on a number of projects with less disruption and expense than the foregoing, is a negative-side barrier system. Details would need to be developed for this particular set of circumstances, but generally, the process involves: cleaning

- If the clothes dryer is to ever be used, we would recommend, without exception, that its exhaust is properly ducted to the outdoors.
- During energy modeling, we would want to verify the sizing of the whole building exhaust system.

#### **Attic Space    Relevant Observations**

Loose cellulose insulation was observed at the attic floor/first floor ceiling joist spaces. Rigid insulation and weather-stripping was observed at the door from the first floor to the attic. Plugs were observed at the cheek walls of the stair leading from the first floor to the attic, leading us to believe that blown-in insulation was added to these walls. No insulation was observed at the underside of the roof structure. Unit roof vents were observed at the roof exterior. Moisture and/or water staining was visible at un-insulated lumber framing the windows.

#### **Conclusions**

The net effect of the above creates a zone of semi-outdoor air within the attic space, and an insulation barrier from the attic space to the first floor living spaces. The differential from outside the roof, to semi-outdoor in the attic space, to indoor at the conditioned spaces on the first floor, creates condensing surfaces inside the house, within the attic space. Under certain temperature and humidity conditions, vapor-laden air will condense on the attic's interior surfaces and wet them. Circumstantial evidence of this includes observed staining at the attic window framing, drips of brown-colored liquid through the first floor ceiling onto furniture below, and cracking at the first floor ceiling and rear bedroom ceiling from repeated cycles of wetting and drying. The present treatment of the attic space has a foot in two worlds, outdoor and indoor, with predictably disastrous results.

#### **Recommendations**

To implement a proper fix, one must first decide whether the attic is to be fully coupled to the outdoor atmosphere, or fully coupled to the indoor environment. The in-place remediation appears to favor the former, but does not achieve this entirely. To complete the present system, we recommend the following:

- Increase thickness of cellulose ceiling/floor joist insulation as close to R-38 as possible.
- Increase thickness/R-value of stair envelope as close to R-20 as possible.

- Flood test and adjust gutters to fully drain.
- Reconnect downspouts to conductors after mowing the lawn.
- Verify that the sump to conductor connection does not permit a backflow condition.
- Seal hairline crack(s) in the porch slab.
- Clean and re-seal joint from porch to exterior wall.
- Re-roof the building by the end of the current warranty period.

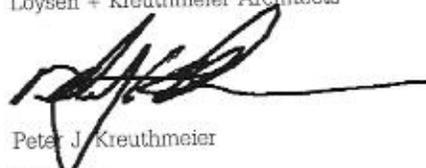
**Next Steps** Our strongest recommendation is for you to address the dehumidifier, testing, and mold remediation steps outlined above as soon as possible. We also strongly recommend that you secure legal representation to pursue the other matters.

At this juncture, further investigation and documentation by us, or by any other firm you may choose, will require the participation of several other parties, including: testing agencies, consulting engineers, construction cost estimators, and contractors to perform investigative demolition and restoration afterwards. While we would be happy to assist you in these endeavors, this is now moving away from pro-bono territory and towards a probable case. I am available to discuss this further with you and your attorney should you decide upon such a course of action.

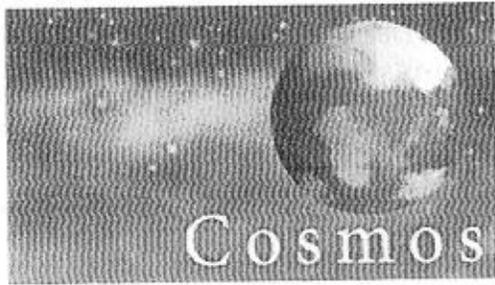
Returning your home to its pre-weatherization state is also possible, but this is difficult for us to endorse. The problems you are experiencing are all fixable. As architects in this day and age, it is critical for us to advocate responsible energy use and healthy indoor environments, and we do, and they're not mutually exclusive. We truly believe that with a few more steps, you can achieve this in your own home.

Sincerely,

Loysen + Kreuthmeier Architects



Peter J. Kreuthmeier  
Principal



# Cosmos Technologies Inc.

## **MOLD ASSESSMENT REPORT**

**525 N. 8<sup>th</sup> Street, Jeannette, PA 15644**

Mr. Peter Kreuthmeier of Loysen and Kreuthmeier (L&K) Architects inspected the residence of Ms. Shirley Surrec, located at 525 North 8th Street, Jeannette, PA 15644 on September 20, 2014. He concluded that the recently installed home weatherization not only did not address pre-existing building conditions but may have exacerbated humidity and health related issues in the home. His recommendation was to conduct a mold assessment

On September 29, 2014, Mr. Kreuthmeier engaged Cosmos Technologies, Inc. (Cosmos) to conduct a mold assessment at the home as referenced above. The sampling plan for the inspection was approved by Mr. Kreuthmeier.

Swab samples were collected in each sensitive area of the home – basement, living room, attic and ductwork. With the exception of the ductwork, the samples were analyzed to quantify and identify Bacteria and Fungi. The ductwork sample would be analyzed for “prevalence only”.

Ms. Nancy Baker, Cosmos Environmental Technician, conducted the field sampling at the residence on October 2, 2014. Ms. Holly Hudson, Vice-President, Safety Engineer and Indoor Environmentalist supervised the work of Nancy Baker and performed the evaluation of the analytical lab data.

Ms. Nancy Baker, Cosmos Environmental Technician, collected swab samples and conducted monitoring for humidity and temperature readings throughout the home during the field sampling event on October 2, 2014. Swab samples were collected over a 5”x5” surface area each and submitted directly to U.S. Micro-Solutions, Inc., an American Industrial Hygiene Association (AIHA LAP, LLC) accredited laboratory, EMLAP #103009, for analysis. Sample locations included:

- SS #1 - Attic window at top of stairway
- SS #2 – Fibrous dust on living room chair
- SS #3 – Living room front window sill
- SS #4 – Basement
- SS #5 – Duct work (dining room register)
- SS #6 - Field Blank

Location		Results
Basement	(SS #4)	<p><b>Bacteria:</b></p> <p>Gram-positive coryneform bacillus – 100%</p> <p><b>Fungi:</b></p> <p>Engyodontium spp. – 75%</p> <p>Aspergillus versicolor – 17%</p> <p>Mucor spp. – 4%</p> <p>Penicillium spp. – 4%</p>
Field Blank	(SS #6)	<b>No Bacteria/Fungi</b>

*Analyses are included in Attachment A.*

### **Discussion:**

Most species detected are common species detected in the environment: i.e. Ascospores (ductwork), Penicillium (living room/basement), Coryneform bacillus (living room) and Micrococcus luteus (living room).

Residue on the living room chair was identified as a Staphylococcus species. A few of the Coagulase-negative Staphylococcus (CNS) species are human pathogens. Visible presence of this bacteria, particularly with penicillium is possibly indicative of a moist environment that is accelerating its growth.

Additional fungal species such as Aspergillus versicolor (basement), Cladosporium spp. (living room), Dematiaceous conidia (ductwork) and Engyodontium spp. (basement) are also specifically indicative of moist and decaying environments. Of note, Engyodontium spp. (basement) also has health impacts.

**ATTACHMENT A**  
**ANALYTICAL REPORTS**



U.S. Micro-Solutions, Inc. \* 475-C Willow Crossing Road \* Greensburg, PA 15601  
 Phone: (724) 853-4047 Fax: (724) 853-4049 AIHA LAP, LLC EMLAP # 103009  
 www.usmicro-solutions.com



Customer Name:	Cosmo Technologies, Inc.	Sample Date:	October 2, 2014
Customer Address:	700 River Ave, Ste. 412 Pittsburgh, PA 15212	Date Received:	October 2, 2014
Customer Phone:	(412) 321-3951	Date of Report:	October 10, 2014
PO Number:		Fax:	
Project Name/Number:	150-02-2014	Attention:	Holly Hudson

Customer sample numbers below are uniquely identified by prefixing Laboratory # 104845-14

Culturable Swab Sample(s) - Analytical Method USMS-M002 & USMS-B002

Sample Number	Media	Sample Description	Results of Microbial Analysis	%	Raw CTs
SS#1	TSA	Attic Window @ Top of Stairway	Total Bacterial Count < 4	CFU/in <sup>2</sup>	
No growth					
Total Raw Count:		<1			
Analytical Sensitivity:		4 CFU/in <sup>2</sup>			
SS#1	IMA	Attic Window @ Top of Stairway	Total Fungal Count < 4	CFU/in <sup>2</sup>	
No growth					
Total Raw Count:		<1			
Analytical Sensitivity:		4 CFU/in <sup>2</sup>			
SS#2	TSA	Fibrous Dust on LR Chair	Total Bacterial Count 4	CFU/in <sup>2</sup>	
					1
Coagulase-negative Staphylococcus spp. 100%					
Total Raw Count:		1			
Analytical Sensitivity:		4 CFU/in <sup>2</sup>			
SS#2	IMA	Fibrous Dust on LR Chair	Total Fungal Count 4	CFU/in <sup>2</sup>	
					1
Penicillium spp. 100%					
Total Raw Count:		1			
Analytical Sensitivity:		4 CFU/in <sup>2</sup>			

Note: Results are reported as calculated. For interpretive purposes of biological data, the final results should be considered significant. Note: Total percentages may not equal 100% due to rounding. All analytical methods are proprietary and remain the property of U.S. Micro-Solutions, Inc. (USMS). Customers are reminded that when providing duplicates of this report, the document should be provided in total and not in sections in accordance with our AIHA accreditation. USMS shall have no liability to the Customer or the Customer's customer for opinions stated, recommendations made, actions taken, or omissions implemented by either the Customer or the Customer's customer based on the test results reported. The Customer will hold harmless and indemnify USMS for damages or lost profits of revenues because of results reported. In no event will USMS's liability of test results reported exceed the amount paid to USMS by the Customer. USMS has provided interpretation of results in great faith using the best information at the time of the survey. Results release only to the items tested.

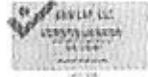
Technical Manager:

*Herbert Layman*

Herbert Layman, BS, SM, CIEC



U.S. Micro-Solutions, Inc. \* 475-C Willow Crossing Road \* Greensburg, PA 15601  
 Phone: (724) 853-4047 Fax: (724) 853-4049 AIHA LAP, LLC EMLAP # 103009  
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Customer Name: Cosmo Technologies, Inc. Sample Date: October 2, 2014  
 Customer Address: 700 River Ave, Ste. 412 Date Received: October 2, 2014  
 Pittsburgh, PA 15212 Date of Report: October 10, 2014  
 Customer Phone: (412) 321-3951 Fax:  
 PO Number: Attention: Holly Hudson  
 Project Name/Number: 150-02-2014

Customer sample numbers below are uniquely identified by prefixing Laboratory # 104845-14

Culturable Swab Sample(s) - Analytical Method USMS-M002 & USMS-B002

Sample Number	Media	Sample Description	Results of Microbial Analysis	%	Raw CTs
SS#6*	TSA	Blank	Total Bacterial Count < 10		CFU/swab
<i>No growth*</i>					
*Results are not blank corrected					
Total Raw Count: <1					
Analytical Sensitivity: 10 CFU/swab					
SS#6*	IMA	Blank	Total Fungal Count < 10		CFU/swab
<i>No growth*</i>					
*Results are not blank corrected					
Total Raw Count: <1					
Analytical Sensitivity: 10 CFU/swab					

Note: Results are reported as calculated. For interpreted purposes of being not data, the first and/or second digit generally should be considered significant. Note: Total percentages may not equal 100% due to rounding. All internal test methods are proprietary and remain the property of U.S. Micro-Solutions, Inc. (USMS). Customers are reminded that when providing duplicates of this report, the document should be provided in total and not in section in accordance with our N/A accreditation. USMS shall have no liability to the Customer or the Customer's customer for upstream causes, circumstances, or media. Action taken or omitted implemented by either the Customer or the Customer's customer based on the test results reported. The Customer will hold harmless and indemnify USMS for damages or lost profits of revenues because of results reported. In no event will USMS's liability of test results reported exceed the amount paid to USMS by the Customer. USMS has provided interpretation of results in good faith using the best information at the time of the survey. Results relate only to the items tested.

Technical Manager:

*Herbert Layman*

Herbert Layman, BS, SM, CIEC

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## CULTURABLES - GUIDELINES AND OPINIONS FOR INDOOR MICROBIAL CONTAMINATION

Currently there are no numeric standards for airborne or surface microbial contamination indoors. Suggested guidelines are constantly being reviewed and edited as more information surrounding microbial IAQ issues surface. Some common denominators should be considered when interpreting results:

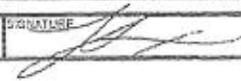
1. Comparison of indoor/outdoor concentration ratios.
2. Complaint vs. non-complaint areas or affected vs. non-affected areas
3. Consider air exchange rates and activity levels in a building structure, weather, and season of the year.
4. Predominant fungal or bacterial genera by rank order assessment & concentrations (Colony Forming Units (CFU) /m<sup>3</sup> of air) of the microbe.
5. Generally fungal counts indoors should be lower than outdoor counts; however, there is always a potential bias from infiltration of outdoor air, poor housekeeping, excessive indoor relative humidity or potential contamination sources (e.g. water intrusion thru a basement wall).

### REFERENCES

‡ *Bioaerosols Assessment and Control*, Macher, J; et. al.: American Conference of Governmental Industrial Hygienists (ACGIH) 1999.

Prezant, Beakley, Weekes, Donald & Miller, David, *Recognition, Evaluation, and Control of Indoor Mold*, American Industrial Hygiene Association (AIHA) 2008.

U.S. MICRO-SOLUTIONS, INC - LABORATORY TEST REQUEST / CHAIN OF CUSTODY

CUSTOMER / COMPANY INFORMATION				4		 U.S. Micro-Solutions, Inc. 475C Witow Crossing Road Greensburg, PA 15601 Phone: 724-853-1047 Fax: 724-853-4049					
NAME: Cosmos Technologies, Inc.				ADDRESS: 700 River Ave, Ste. 412				CITY, STATE, ZIP Pittsburgh, PA 15212			
ATTENTION TO (Results of Analysis): Holly Hudson				PHONE NUMBER: (412) 321-3951		WEATHER    FCG    RAIN    SNOW    WIND    CLEAR LEVEL NONE LIGHT MODERATE HIGH					
SAMPLE OBTAINED BY: Nancy Baker				PROJECT NAME/NUMBER: 150-02-2014		NUMBER OF SAMPLES: 5					
TURN AROUND TIME: (CHECK ONE)				RESULTS SENT VIA (CHECK ONE)		SAMPLE TYPE (X)		ANALYSIS REQUESTED (X)			
<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> NEXT DAY <input type="checkbox"/> SAME DAY <input type="checkbox"/> 3-HOUR <input type="checkbox"/> SATURDAY											
RESULTS SENT VIA (CHECK ONE)				BIODEGRADABLE (CULTURABLE) SWAB    BULK    SPORE TRAP    TAPE    OTHER (PLEASE LIST) FUNGAL CULTURE & GENUS ID BACTERIA CULTURE W/GRAM STAIN ID BACTERIA W/GENUS & GRAM NEG SPECIES ID SEWAGE SCREEN LEGIONELLA CULTURE COLLETT (WATER ONLY) SPORE TRAP COUNT DIRECT MICROSCOPIC EXAMINATION OTHER (PLEASE LIST)		PAYMENT INFORMATION (CHECK ONE) <input type="checkbox"/> ON ACCOUNT <input type="checkbox"/> CREDIT CARD <input checked="" type="checkbox"/> PAYMENT ENCLOSED		EMAIL ADDRESS: hudson@cosmostechnologiesinc.com    FAX NUMBER:			
<input checked="" type="checkbox"/> EMAIL RESULTS <input type="checkbox"/> US POSTAL SERVICE <input type="checkbox"/> FAX RESULTS											
PO #		PROPOSAL #		SAMPLE DATE		SAMPLE NUMBER		SAMPLE LOCATION & DESCRIPTION		SAMPLE VOLUME / AREA	
				10.02.14		SS #1		ATTIC window @ Top of Stairway		5"x5"	
				10.02.14		SS #2		Fibrous Dust on L.R. Chair		5"x5"	
				10.02.14		SS #3		Living Room Front window s/v		5"x5"	
				10.02.14		SS #4		Living Basement		5"x5"	
				10.02.14		SS #5		Duct Work ( Dining Room Register )		5"x5"	
				↓		SS #6		Blank		5"x5"	
RELINQUISHED BY (PRINT SIGN) DATE AND TIME: Nancy J. Baker 10-2-14 11:20				RELINQUISHED BY (PRINT SIGN) DATE AND TIME:							
LAB USE ONLY DATE/TIME RECEIVED IN LAB: 10/2/14 11:30		SIGNATURE: 		LABORATORY # 104845-14		DATE OF TEST SET UP: 10/2/14		SIGNATURE: 		DATE: 10/2/2014	

Patient Name: SURREC,  
SHIRLEY, E  
DOB: 8/7/1948, Age: 66 YO F  
Acct #: 05118

Org Name: DR ROBERT GORBY  
Address: 530 South Street, Suite 280  
Greensburg, PA 15601-2775  
724-830-8517

Encounter Date: 10/7/2014  
Provider Name : Gorby, Robert  
Note Title : 10/7/2014

This 66-year-old woman was seen and evaluated on October 7, 2014. She's had an approximate one-year history of symptoms which consist of severe nasal congestion, postnasal drainage, epistaxis, shortness of breath, throat irritation, enteritis of her eyes and nose. The symptoms seem to begin a short time after having insulation installed in her attic. Patient notices that her house has been much more dusty, with particular matter throughout her house since that insulation was installed.

In addition, she has noticed that she has a dusty particulate coating on very many things around the house. She has been on Nasonex but has not been very helpful for her. She is also been using some nasal saline at times but seems to help slight amount. She has been on multiple courses of antibiotics for apparent bouts of sinusitis and upper respiratory tract infections.

#### Past medical history:

Past medical history significant for COPD, and also atrial fibrillation, she is currently on warfarin losartan, Qvar, propafenone, omeprazole, Amaryl, and Atrovent via the neb. She has an apparent sulfa allergy.

#### Family history:

Her family history is significant for allergies in her mother

#### Environmental survey:

As mentioned, she had new insulation installed approximately one year ago and then also been quite dusty since. There is also to ampicillin in her basement and she recently had house tested for mold. There are no animals and she is a nonsmoker. She sleeps on a regular mattress.

#### Review of Systems

The review of systems is as noted in the 10 point patient questionnaire.  
There are no other general, ocular, nasal, ear, throat ,chest, neurological, GI, genitourinary, or skin complaints

#### Physical Exam

The head and face were normal. There was no suborbital venous congestion. The tympanic membranes were normal. The nose revealed an increase in erythema. The oropharynx was clear, and there was no cervical adenopathy. The lungs were clear to auscultation and percussion. The heart revealed a regular rate and rhythm.

#### Skin Tests:

Skin tests were performed by the multi- test method to a wide variety of aeroallergens including:

Elm, birch, oak, maple, sycamore, cottonwood, ash, pine mix, hickory, english plantain, fall mix, lambs quarter, ragweed, cocklebur, d. farinae, d. pteronyssinus, alternaria, aspergillus, helminthosporium, fusarium, epicoccum, hormodendrum, penicillium, feather, horse, cockroach, dog, cat, perennial rye, timothy, meadow fescue, sweet vernal, red top, pigweed, orchard grass, and sorel, as well as positive and negative histamine controls.

Parent Name: SORNEC,  
SHIRLEY, E  
DOB: 8/7/1948, Age: 66 YO F  
Acct #: 05118

Off Name: DR ROBERT GORBY  
Address: 530 South Street, Suite 280  
Greensburg, PA 15601-2775  
724-830-8517

With exception to the histamine control, she was negative to everything tested

Assessment/plan:

No evidence for IgE mediated hypersensitivity  
Nonallergic rhinitis  
Probable irritant reaction from insulation

With regard to her symptoms, since there is quite a bit of dust in her house and this seems to have been increased since the insulation was installed, I feel that the insulation is probably a major factor in her symptoms. I have recommended that if possible she had that insulation removed, but if she does she should be out of the house for some time as this will probably take up even more particulate matter for a while. I've explained in great detail the difference between allergic and nonallergic rhinitis, and also the fact that if she specifically does have the latter. I think she should continue with her Nasonex I plan on seeing her back on an as-needed basis.

No Active Diagnosis and Procedures.

This note has been electronically signed by  
Robert Gorby 10/7/2014 12:01 PM