

From: Szalacha, Pamela M.:(ComEd)
Sent: Tuesday, March 22, 2011 2:59 PM
To: Schuster, Ronald J.:(GenCo)
Cc: Vargas, Anna E.:(ComEd); Torkelson, Douglas W.:(ComEd)
Subject: Average hrs at Zion Station yard
Ron,

Here is a very rough estimated hours for the routine maintenance performed in the station yard.

Yearly:

OCB oil quality testing yearly apx	10hrs
Compressor Maint yearly	15hrs
Snow removal as needed	

Feg schedule maint apx every 3yrs 855hrs

This includes the breakers, disconnects, ccvts, wave traps and inspections of the batteries, spcc, bld/bsmt and yard.

if you need information on the transformers please let me know. Or anything else please don't hesitate to ask.

Thanks, Pam

Harvey Farr

From: Harvey Farr <hcfarr@energysolutions.com>
Sent: Wednesday, May 08, 2013 8:36 AM
To: Chris Baker; Harvey Farr; Robert C. Keene
Cc: Jack N. Bailey
Subject: RE: Zion Hours 2013.xlsx

Chris,

I believe this just shows how conservative and bounding our calculation is. They report 1148 hours distributed among 109 individuals. The bounding calculation in EH&S TSD 13-02 assumes a single individual 2,496 hours a year for 61 mrem/year at a dose rate of 34.44 μ rem/hr. I will save this to the EH&S TSD folder. It just provides more basis that no one is likely to approach the 100 mrem/year limit. I think this also shows that even if one of the 109 individuals frequented the south fence area for several visits they would be well below the 100 mrem/year limit since 2,496 hours a year at the highest location on the fence would result in 390.3 mrem. When you look at the man-hours data there are a smattering of accesses with 48 hour durations. Even if the individual was right up against the south fence for the entire 48 hour duration that would only be 7.5 mrem of exposure at the peak dose rate of 156.36 μ rem/hr. It seems to me that this is very unlikely. The actual average dose rate in that south fence area is 34.44 μ rem/hr. So this data supports the assertion that the calculation is very conservative and bounding.

Thanks for getting this to me I will put it in a folder in our EH&S TSD folder. Great data.

Harv

Max Effort	Rd	Work Order Nbr	Work Order Task	Work Order Type	MHRS	Highest South Fence mrem	South Fence Dose Rate μ rem/hr
2	1	07398178	01	PM	4	0.63	156.36
1	1	07618204	01	PM	8	1.25	
1		07199733	01	PM	1	0.16	
3	1	07197761	01	PM	24	3.75	
3	2	07199734	01	PM	48	7.51	
2	4	07474562	01	PM	8	1.25	
		07474555	01	PM	8	1.25	
		07474560	01	PM	8	1.25	
		07474556	01	PM	8	1.25	
3	2	07196365	01	PM	48	7.51	
1		07195617	01	PM	1	0.16	
1		07203491	01	PM	1	0.16	
3	2	07204352	01	PM	48	7.51	
3	1	07202142	01	PM	24	3.75	
3	2	07195619	01	PM	48	7.51	
1		07195618	01	PM	1	0.16	
		07492723	01	PM	8	1.25	

		07492722	01	PM	8	1.25
1	1	07665878	01	PM	8	1.25
1	1	07665877	01	PM	8	1.25
3	1	07244475	01	PM	24	3.75
	1	07525361	01	PM	4	0.63
	1	07525363	01	PM	4	0.63
	1	07525368	01	PM	8	1.25
	1	07525362	01	PM	4	0.63
	1	07525360	01	PM	4	0.63
	1	07525367	01	PM	8	1.25
1		07222443	01	PM	1	0.16
1		07222433	01	PM	1	0.16
3	2	07291247	01	PM	48	7.51
2	1	07240139	01	PM	6	0.94
2	1	07240138	01	PM	6	0.94
3	2	07289390	01	PM	48	7.51
3	1	07240509	01	PM	24	3.75
	1	07215965	01	PM	4	0.63
	1	07551949	01	PM	8	1.25
	1	07549883	01	PM	8	1.25
	1	07215964	01	PM	4	0.63
	1	07549884	01	PM	8	1.25
	1	07215967	01	PM	4	0.63
	1	07551948	01	PM	8	1.25
	1	07215966	01	PM	4	0.63
3	1	07230891	01	PM	24	3.75
1	2	07322860	01	PM	1	0.16
		07322862	01	PM	1	0.16
		07322859	01	PM	1	0.16
		07322864	01	PM	1	0.16
		07424839	01	PM	1	0.16
		07424840	01	PM	1	0.16
1	1	07449155	01	PM	1	0.16
1	1	07448277	01	PM	8	1.25
1	1	07448274	01	PM	8	1.25
1	1	07448276	01	PM	8	1.25
1	1	07448275	01	PM	8	1.25
1	1	07475398	01	PM	4	0.63
1	1	07475369	01	PM	4	0.63
1		07463166	01	PM	1	0.16
1	2	06667466	02	PM	12	1.88
1	2	06667465	02	PM	12	1.88
3	2	06667466	01	PM	48	7.51
3	2	06667465	01	PM	48	7.51
	1	07508496	01	PM	8	1.25
	1	07508494	01	PM	8	1.25
	1	07508500	01	PM	8	1.25

3	1	07467410	01	PM	24	3.75
	1	07491916	01	PM	4	0.63
	1	07491894	01	PM	4	0.63
	1	07491920	01	PM	8	1.25
	1	07491918	01	PM	8	1.25
3	2	06810008	01	CM	48	7.51
3	2	07522340	01	PM	48	7.51
3	2	07522338	01	PM	48	7.51
1	1	07522341	01	PM	1	0.16
1	1	07522337	01	PM	1	0.16
	1	07524598	01	PM	4	0.63
	1	07524599	01	PM	4	0.63
	1	07527052	01	PM	8	1.25
1	1	07567557	01	PM	1	0.16
1	1	07567558	01	PM	1	0.16
1	1	07567560	01	PM	1	0.16
1	1	07567559	01	PM	1	0.16
1	1	07567556	01	PM	1	0.16
1	1	07567555	01	PM	1	0.16
1	1	07567553	01	PM	1	0.16
1	1	07567552	01	PM	1	0.16
1	1	07567554	01	PM	1	0.16
1	1	07567551	01	PM	1	0.16
	4	07551950	01	PM	4	0.63
	4	07551951	01	PM	4	0.63
2	3	07644355	01	PM	2	0.31
		07644355	01	PM	2	0.31
		07644355	01	PM	2	0.31
		07644355	01	PM	2	0.31
		07644355	01	PM	2	0.31
		07644355	01	PM	2	0.31
1	1	07666706	01	PM	6	0.94
1	1	07514066	01	PM	1	0.16
		07669880	01	PM	2	0.31
	1	07464563	01	PM	1	0.16
	1	07537230	01	PM	1	0.16
1	3	07646227	01	PM	3	0.47
		07644356	01	PM	2	0.31
		07644974	01	PM	2	0.31
1	2	07450152	01	PM	2	0.31
1	10	07647601	01	PM	20	3.13
1	1	07608090	01	PM	2	0.31
		07514067	01	PM	1	0.16
		07514068	01	PM	1	0.16
		07537232	01	PM	1	0.16
1	1	07666707	01	PM	5	0.78
	1	07676269	01	PM	1	0.16

2	1	07644354	01	PM	2	0.31
1	1	07667936	01	CM	1	0.16
2	1	07548744	01	PM	2	0.31
1	1	07646228	01	PM	3	0.47
1	1	07646227	01	PM	3	0.47
1	1	07646227	01	PM	3	0.47
1	12				48	7.51
	1	07464560	01	PM	1	0.16
109	139	TOTAL HOURS			1128	

Head Count effective on based staffing for a total of 109 Individuals.

Exposure to location is 139 days of a year.

Averaged totals for three years.

From: Chris Baker

Sent: Wednesday, May 08, 2013 7:05 AM

To: Harvey Farr; Robert C. Keene; Harvey Farr

Subject: FW: Zion Hours 2013.xlsx

Finally received this from ComEd. Any impact on TSD#13-002?

S. Chris Baker

VP - ES&H

Zion Solutions

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From: pamela.szalacha@ComEd.com [mailto:pamela.szalacha@ComEd.com]

Sent: Tuesday, May 07, 2013 1:25 PM

To: Chris Baker

Subject: Zion Hours 2013.xlsx

Chris,

Here is the average exposure rate based on our Scheduled PM Maint cycle. Using manpower and hours. If you have any questions please let me know. Thanks, Pam

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