SUMMARY OF RELEASES

		Ammonia	Hydrazine	Lead	Naphthalene	Zinc Compounds
SECTION 3 - ACTIVITIES AND USES						
	TRI Form R Value	3.1a,e | 3.3c	**3.3c**	**3.3c**	3.1a,e | 3.3c	**3.3c**
SECTION 4.1 - MAXIMUM ONSITE			Threshold Wksht Sum	Threshold Wksht Sum		Threshold Wksht Sum
MAXIMUM AMOUNT ONSITE		0.00	19,866.00	380.10	172.39	46,431.64
	TRI Form R Value	**01**	**04**	**02**	**02**	**04**
SECTION 5.1 - FUGITIVE AIR						
FIRING RANGE			NA	0.65		0.00
BOILER WATER TREATMENT		0.00	NA	NA		NA
WELDING RODS			NA	0.00		0.00
TOTAL		0.00	0.00	0.65	0.00	0.00
Sec. 5.1 A	**TRI Form R Value**	**0.00**	**0.00**	**0.70**	**0.00**	**0.00**
Sec. 5.1 B	**Basis of Estimate**	**O**	**O**	**E1**	**O**	**O**
SECTION 5.2 - STACK AIR						
FUEL			NA	0.00		0.00
Sec. 5.2 A	**TRI Form R Value**	NA	**NA**	**0.00**	**0.00**	**0.00**
Sec. 5.2 B	**Basis of Estimate**			**E1**	**O**	**E1**
AIR		0.00	0.00	0.70	0.00	0.00
SECTION 5.3 - WATER RELEASES						
TENNESSEE RIVER		**0.00**	0.00	0.00		0.00
Sec. 5.3.1 A	**TRI Form R Value**	*0.00*	**0.00**	**0.00**	NA	**0.00**
Sec. 5.3.1 B	**Basis of Estimate**	C	**O**	**M2**		**C**
Sec. 5.3.1 C	**% from Stormwater**	NA	**0.00**	**0.00**		**0.00**
WATER		0.00	0.00	0.00	NA	0.00
SECTION 5.5.4 - ON-SITE OTHER DISPOSAL						
FIRING RANGE			NA	379.45		32.85
OTHER			0.00	0.00		0.00
Sec. 5.5.4 A	**TRI Form R Value**	NA	**0.00**	**380.0**	NA	**33.00**
Sec. 5.5.4 B	**Basis of Estimate**		**O**	**C**		**O**
LAND		NA	0.00	380.00	NA	33.00
SECTION 6.2 - OFF-SITE DISPOSAL						
RHEA COUNTY LANDFILL	**M64**	NA	**NA**	0.00	NA	NA
Sec. 6.2 A	**TRI Form R Value**	NA	**NA**	**0.00**	NA	NA
Sec. 6.2 B	**Basis of Estimate**			**O**		
CHEMICAL WASTE MANAGEMENT - EMELLE	**M65**	NA	**NA**	0.90	NA	NA
Sec. 6.2 A	**TRI Form R Value**	NA	**NA**	**0.90**	NA	NA
Sec. 6.2 B	**Basis of Estimate**			**O**		
US TVA MS HAZ WASTE STORAGE FACILITY	**M94**	NA	**NA**	**0.04**	NA	NA
Sec. 6.2 A	**TRI Form R Value**	NA	**NA**	**0.00**	NA	NA
Sec. 6.2 B	**Basis of Estimate**			**O**		
BUCKNER BARREL SALES CORP.	**M99**	NA	**NA**	**0.00**	NA	NA
Sec. 6.2 A	**TRI Form R Value**	NA	**NA**	**0.00**	NA	NA
Sec. 6.2 B	**Basis of Estimate**			**O**		
HOLSTON GROUP	**M99**	NA	**NA**	3.73	NA	NA
Sec. 6.2 A	**TRI Form R Value**	NA	**NA**	**3.70**	NA	NA
Sec. 6.2 B	**Basis of Estimate**			**O**		
CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.	**M99**	NA	**NA**	**0.00**	NA	NA
Sec. 6.2 A	**TRI Form R Value**	NA	**NA**	**0.00**	NA	NA
Sec. 6.2 B	**Basis of Estimate**			**O**		
TCI OF ALABAMA, LLC	**M99**	NA	**NA**	0.08	NA	NA
Sec. 6.2 A	**TRI Form R Value**	NA	**NA**	**0.10**	NA	NA
Sec. 6.2 B	**Basis of Estimate**			**O**		
CLEAN HARBORS DEER PARK	**M99**	NA	**NA**	**0.00**	NA	NA
Sec. 6.2 A	**TRI Form R Value**	NA	**NA**	**0.00**	NA	NA
Sec. 6.2 B	**Basis of Estimate**			**O**		
OFF-SITE DISPOSAL		**0.00**	**0.00**	**4.70**	**0.00**	**0.00**
SECTION 6.2 - OFF-SITE RECYCLING						
TENNESSEE VALLEY RECYCLING						
Sec. 6.2 A	TRI Form R Value	NA	NA	NA	NA	NA
Sec. 6.2 B	Basis of Estimate	NA	NA	NA	NA	NA
SECTION 7 - ON-SITE WASTE TREATMENT METHODS AND EFFICIENCY						
Sec 7A.1a	**Waste Stream Code**	W	**W**	**W**	NA	W
Sec 7A.1b	**Treatment Method**	H081 | H129 | NA	**H081 | H129 | NA**	**H081 | H129 | NA**	NA	H081 | H129 | NA
Treatment Efficiency	**%**	0.00	0.00	0.00	NA	0.00
Sec 7A.1d		E6	**E6**	**E6**		E6

SUMMARY OF RELEASES

SECTION 8 - SOURCE REDUCTION AND RECYCLING ACTIVITIES		Ammonia	Hydrazine	Lead	Naphthalene	Zinc Compounds
SECTION 8.1A - TOTAL DISPOSAL TO ON-SITE LANDFILL						
Column A	**Prior Year**	NA	NA	NA	NA	NA
	Current Year	NA	NA	NA	NA	NA
Column B	**TRI Form R Value**	NA	**NA**	**NA**	NA	NA
Column C	**Following Year**	NA	**NA**	**NA**	NA	NA
Column D	**2nd Following Year**	NA	**NA**	**NA**	NA	NA
SECTION 8.1B - TOTAL OTHER ON-SITE DISPOSAL						
Column A	**Prior Year**	NA	NA	440.0	NA	0.00
	Current Year	0.00	0.00	380.7	0.00	33.00
Column B	**TRI Form R Value**	0.00	**0.00**	**380.0**	0.00	**33.00**
Column C	**Following Year**	0.00	**0.00**	**380.0**	0.00	**33.00**
Column D	**2nd Following Year**	0.00	**0.00**	**380.0**	0.00	**33.00**
SECTION 8.1C - TOTAL OFF-SITE DISPOSAL TO LANDFILL						
Column A	**Prior Year**	NA	**NA**	4.90	NA	**NA**
	Current Year	NA	NA	0.90	NA	NA
Column B	**TRI Form R Value**	NA	**NA**	**0.90**	NA	**NA**
Column C	**Following Year**	NA	**NA**	**0.90**	NA	**NA**
Column D	**2nd Following Year**	NA	**NA**	**0.90**	NA	**NA**
SECTION 8.1D - TOTAL OTHER OFF-SITE DISPOSAL						
Column A	**Prior Year**	NA	**NA**	0.30	NA	NA
	Current Year	NA	NA	3.80	NA	NA
Column B	**TRI Form R Value**	NA	**NA**	**3.80**	NA	**NA**
Column C	**Following Year**	NA	**NA**	**3.80**	NA	**NA**
Column D	**2nd Following Year**	NA	**NA**	**3.80**	NA	**NA**
SECTION 8.5 - TOTAL QUANTITY RECYCLED OFFSITE						
Column A	**Prior Year**	NA	NA	NA	NA	NA
	Current Year	NA	NA	NA	NA	NA
Column B	**TRI Form R Value**	NA	**NA**	**NA**	NA	**NA**
Column C	**Following Year**	NA	**NA**	**NA**	NA	**NA**
Column D	**2nd Following Year**	NA	**NA**	**NA**	NA	**NA**
SECTION 8.6 - TOTAL QUANTITY TREATED ONSITE						
Column A	**Prior Year**	NA	NA	NA	NA	NA
	Current Year	NA	NA	NA	NA	NA
Column B	**TRI Form R Value**	NA	**NA**	**NA**	NA	**NA**
Column C	**Following Year**	NA	**NA**	**NA**	NA	**NA**
Column D	**2nd Following Year**	NA	**NA**	**NA**	NA	**NA**
SECTION 8.8 - RELEASES DUE TO ONE-TIME EVENTS						
Column A	**Prior Year**	NA	NA	NA	NA	NA
	Current Year	NA	NA	NA	NA	NA
Column B	**TRI Form R Value**	NA	**NA**	**NA**	NA	**NA**
Column C	**Following Year**	NA	**NA**	**NA**	NA	**NA**
Column D	**2nd Following Year**	NA	**NA**	**NA**	NA	**NA**
SECTION 8.9 - PRODUCTION RATIO	**TRI Form R Value**	0.00	**0.70**	**0.86**	5.13	**0.00**

TRI Chemical	Reportable?	Air	Water	Onsite Disposal	Off-Site Disposal	Total
Ammonia	No					
Antimony Compounds	No					
Arsenic Compounds	No					
Barium Compounds	No					
Benzo(g,h,i)perylene	No					
Chlorine	No					
Cadmium Compounds	No					
Chromium Compounds	No					
Cobalt Compounds	No					
Copper Compounds	No					
Dioxin and Dioxin-like Compounds, grams	No					
Ethylene Glycol	No					
Hydrazine	Yes	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Hydrochloric Acid (aersol)	No					
Hydrogen Flouride	No					
Lead / Lead Compounds	Yes	**0.70**	**0.00**	**380.00**	**4.70**	**385.40**
Manganese Compounds	No					
Mercury Compounds	No					
Naphthalene	No					
Nickel Compounds	No					
Nitrate Compounds	No					
PACs	No					
Selenium Compounds	No					
Silver Compounds	No					
Sulfuric Acid	No					
Thallium Compounds	No					
Vanadium Compounds	No					
Zinc / Zinc Compounds	No					
Totals		***0.70***	***0.00***	***380.00***	***4.70***	***385.40***

AIR EMISSIONS

Fugitive Air Emissions From Ammunition Use		
Ammunition Fired [1]:	**1,086.00**	**lbs**
	Lead	**Units**
Air Emission Factor[2]	0.0006	lbs/lbs
Fugitive Air Emissions	**0.65**	lbs

Notes:

1. "Ammunition" worksheet L:\CY 11\Nuclear TRI Files\SQN\Thresholds\SQN CY11 TRI Thresholds.xlsx
2. EPA default emission factor is pounds of pollutant per ton (i.e., 2,000 pounds) of rounds fired. For lead, emission factor is 1.2 pounds of lead per 2,000 pounds of rounds fired [AP-42 Chapter 13.3 Explosives Detonation (2/1980)].

Air Emissions from Point-Source Fuel Combustion				
Gasoline [1]:	**-**	**gallons**		
No.2 Fuel Oil [1]:	**32,308.26**	**gallons**		
	Lead Compounds [2]	**Naphthalene [3]**	**PACs [4]**	**Units**
Gasoline Emission Factors	--	5.88E-05	--	lb/lb
Diesel Emission Factors	1.25E-06	1.19E-05	1.75E-09	lb/gal
Stack Air Emissions	**0.04**	**0.4**	**0.0001**	lbs

Notes:

1. "Fuel" worksheet L:\CY 11\Nuclear TRI Files\SQN\Thresholds\SQN CY11 TRI Thresholds.xlsx
2. Fuel oil values are found in Table C-1 of EPA's *Emergency Planning and Community Right-to-Know Act – Section 313: Guidance for Reporting Releases and Other Waste Management Quantities of Toxic Chemicals: Lead and Lead Compounds (EPA 260-B-01-027; December 2001).*
3. Organics manufactured during gasoline combustion are associated with exhaust and crankcase emissions. These estimates were derived from AP-42, Volume 1, Chapter 3.3 "Gasoline and Diesel Industrial Engines."
4. Fuel oil values are found in *Locating & Estimating Air Emissions from Sources of Polycyclic Organic Matter* (EPA-454/R-98-014; July 1998).

LAND DISPOSAL

Land Disposal - Firing Range			
	Lead	Zinc	Units
Amount Used[1,3]	380.10	32.85	lbs
Air Emissions	0.65	-	lbs
Land Disposal[3]	**379.45**	**32.85**	lbs

Notes:

1. "FireRnge" worksheet L:\CY 11\Nuclear TRI Files\SQN\Thresholds\SQN CY11 TRI Thresholds.xlsx

WATER RELEASES

Outfall Name	Flow	Releases (mg/L)										
	Mgd	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chlorine	Cobalt	Copper	Lead	Manganese
101	1,490.73	0.0000	0.00005	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0000	0.7770
110	1,594.50											
116	0.060											
117	0.014											
118	0.000											
103	1.197	0.001	0.001	0.000	0.001	0.001	0.00	0.00	0.00	0.00	0.00	0.00
107	0.003											
Totals (lb/yr)											0.00	

Notes:

1 Flows (long-term average) taken from SQN NPDES permit application, issued 02/02/2011: L:\CY11\Nuclear TRI Files\SQN\SQN permit application 01.27.09.pdf
2 Concentrations taken from SQN NPDES permit application 01/27/09 which required monitoring for all metals; max daily effluent onsite - intake used as there were no long-term ave
3 From the NPDES permit, Outfalls 101, 116-118 discharge to the TN River. Outfall 103 is an internal wastewater outfall which discharges into Outfall 101 so concentrations are not
are stormwater outfalls that do not require monitoring. Outfalls 116-117, 110 are backwash wastewater outfalls that require no monitoring.
4 From NPDES permit application, no monitoring data for outfalls 110, 116-118, and 107.
5 Based on analyses from other plants, process water from the cooling tower / condensers typically do not contain metals. Therefore, all of the metal concentrations lower than detec
6 Covered by the TN Multisector stormwater permit, which requires monitoring for iron only. The site NPDES permit does not require routine monitoring (DMR) for a
7 NPDES Permit Application renewal monitoring data (the composite metal sample) is used to estimate releases to the T
8 Hydrazine is added to the water prior to discharge. The hydrazine reacts in the water to form ammonia. Therefore, no hydrazine is released to the Tennessee River.
9 Zinc discharge calculated by mass balance and not the one-time sample.

ZINC MASS BALANCE

Chemical Name	Quantity Used (lbs)	Percent Zinc	Zinc Released TN River (lbs)
MSW-109	0.00	12.5%	0.00
Flogard MS3267	0.00	25.0%	0.00

Source: L:\CY 11\Nuclear TRI Files\SQN\Thresholds\SQN CY11 TRI Thresholds.xlsx - Chemicals

Notes:

1 The zinc used in boiler water treatment is assumed to be released to the Tennessee River and the NPDES data is not used.

AMMONIA RELEASES

BOILER WATER TREATMENT		TOTAL LBS
Ammonia used for boiler water treatment, lb/yr	NBWT	**0.00**
TOTAL AMMONIA RELEASE		**TOTAL LBS**
Air releases due to ammonia storage tank leakage, lbs/yr	TankLeak	0.00
Sum total of ammonia in the flue gas from NOx reduction and FGC, lb/yr	L	0.00
Total stack air ammonia releases, lb/yr	NS	0.00
Stack air ammonium bisulfate (ABS) releases, lb/yr - not reportable	NS_ABS	0.00
Total fugitive air ammonia releases, lb/yr	NF	0.00
Total land ammonia releases, lb/yr - Not reportable	NL	0.00
Total water ammonia releases, lb/yr	NW	0.00
Total reportable ammonia releases, lb/yr	NTR	0.00
TOTAL AMMONIA TREATED ONSITE		**0.00**
PERCENT TREATED ONSITE		0

Notes:

1. Ammonia was not reportable because less than 100,000 lbs of solution was used. Threshold is based on total solution amount*0.10 (10 percent).
2. Ammonia treated onsite calculated from "A Method for Estimating Total Ammonia Emissions from Stationary Power Plants," by S.L. Wilson, K.E. Harrison, & L.S. Monroe. Assumption was made that the fate of ammonia would be the same as it is inn fossil plants.
3. Ammonia used for boiler water treatment obtained from the total ammonium hydroxide amount times the percent contribution times the molecular weight ratio of ammonia to ammonium hydroxide

Source: L:\CY 11\Nuclear TRI Files\SQN\Thresholds\SQN CY11 TRI Thresholds.xlsx - Chemicals

OFF-SITE DISPOSAL

		DISPOSITION											
		Off Site Disposal-M10		Off-site Disposal-M65		Off-site Disposal-M99							
GENERATOR	Data	Muscle Shoals HWSF	Off Site Disposal-M10 Total	CHEMICAL WASTE MANAGEMENT - EMELLE	Off-site Disposal-M65 Total	BUCKNER BARREL SALES CORP.	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.	HOLSTON GROUP	TCI OF ALABAMA, LLC	RHEA COUNTY LANDFILL	Clean Harbors Deer Park, La Porte, TX	Off-site Disposal-M99 Total	Grand Total
SQN	Sum of AS (lb)	0.04	0.04	0.90	0.90			3.37	0.00			3.37	4.32
	Sum of BA (lb)	0.88	0.88	17.33	17.33			66.91	0.00			66.91	85.12
	Sum of CD (lb)	0.01	0.01	0.17	0.17			0.67	0.01			0.68	0.86
	Sum of CR (lb)	0.06	0.06	0.99	0.99			3.36	0.01		2.45	3.37	6.86
	Sum of PB(lb)	0.04	0.04	0.90	0.90			3.73	0.08		0.001	3.80	4.75
	Sum of HG (lb)	0.00	0.00	0.03	0.03			0.13	0.00		4.00	0.13	4.17
	Sum of SE (lb)	0.01	0.01	0.18	0.18			0.67	0.00			0.67	0.86
	Sum of AG (lb)	0.04	0.04	0.91	0.91			3.35	0.00			3.35	4.30

Reference: L:\CY 11\Waste Data\CY11_HWSF Calculations -C (043012c).xlsx

Notes: Additional spill information provided in SQN CY11 TRI Questionnaire.docx

1 Lab pack shipment of potassium dichromate (6 lbs) shipped to Clean Harbors Deer Park, La Porte TX (EPA ID TXD055141378)

K2Cr2O7:	
K	39.098
Cr	51.996
O	15.999
ratio Cr/K2Cr2O7	0.408
lbs Cr shipped	2.446

2 Lab pack shipment of waste mercury (4 lbs) shipped to Clean Harbors Deer Park, La Porte TX (EPA ID TXD055141378)

3 Used oil shipments for oil showing above detection limits for lead:
3/15/11 - 550 gallons

Used oil - gallons	550	gal
Emission factor	1.25E-06	lb/gal
lbs lead shipped	6.88E-04	lbs

WELDING ROD AIR EMISSIONS

Item	Description	Type	Notes	Total Weight (lb)	Chromium		Colbalt		Lead		Manganese		Nickel	
					EF	lbs	EF	lbs	EF	lbs	EF	lbs	EF	lbs
1	7018 MR 1/8	E7018			0.060	0.000	0.010	0.000	ND		10.300	0.000	0.020	0.000
2	95/5	Average		1.0000	3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
3	Aluminim Tig Wire*	Average			3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
4	BAG7	Average		1.9928	3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
5	BCUP2	Average			3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
6	BCUP5	Average		0.6237	3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
7	E30816	E308			5.240	0.000	0.010	0.000	ND		3.460	0.000	1.840	0.000
8	E30916	E70S			0.010	0.000	0.010	0.000	ND		3.180	0.000	0.010	0.000
9	E31616	E70S			0.010	0.000	0.010	0.000	ND		3.180	0.000	0.010	0.000
10	E7018	E7018		274.4720	0.060	0.000	0.010	0.000	ND		10.300	0.028	0.020	0.000
11	E70S3	E70S		0.9855	0.010	0.000	0.010	0.000	ND		3.180	0.000	0.010	0.000
12	E70S6	E70S			0.010	0.000	0.010	0.000	ND		3.180	0.000	0.010	0.000
13	E70S6(SP)	E7018			0.060	0.000	0.010	0.000	ND		10.300	0.000	0.020	0.000
14	E9018B3	E9018			2.120	0.000	ND		ND		7.830	0.000	0.130	0.000
15	ENICRFE3	Average			3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
16	ER309	Average		4.6403	3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.001	2.720	0.000
17	ER309L	Average		8.5000	3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.001	2.720	0.000
18	ER316/L	Average		24.8285	3.465	0.001	0.012	0.000	0.930	0.000	15.684	0.004	2.720	0.001
19	ER320	ENiCrMo			4.200	0.000	ND		ND		0.430	0.000	2.470	0.000
20	ER5356	E70S		1.3548	0.010	0.000	0.010	0.000	ND		3.180	0.000	0.010	0.000
21	ER70S6	Average		107.6631	3.465	0.004	0.012	0.000	0.930	0.001	15.684	0.017	2.720	0.003
22	ER70S6(SP)	E70S			0.010	0.000	0.010	0.000	ND		3.180	0.000	0.010	0.000
23	ER90SB3	Average		77.2491	3.465	0.003	0.012	0.000	0.930	0.001	15.684	0.012	2.720	0.002
24	ERCUSIA	Average			3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
25	ERNICR3	Average			3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
26	ERNICRMO3	ENiCrMo		24.4797	4.200	0.001	ND		ND		0.430	0.000	2.470	0.001
27	ERNICROMO3	ENiCrMo			4.200	0.000	ND		ND		0.430	0.000	2.470	0.000
28	Mig Welding Rod (unspecified)	Average			3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
29	RCOCRA	Average			3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
30	SN96WS	Average			3.465	0.000	0.012	0.000	0.930	0.000	15.684	0.000	2.720	0.000
--	**Total**			**527.7895**		**0.009**		**0.000**		**0.002**		**0.064**		**0.007**

Notes:

1 Pounds of metal emitted per 10,000 pounds of welding rods used
2 The "Average" emission factor is used where there is no emission factor information provided for a particular welding rod.
3 Amounts taken from: L:\CY 11\Nuclear TRI Files\SQN\Thresholds\SQN CY11 TRI Thresholds.xlsx

WELDING ROD AIR EMISSIONS

Welding Emission Factors

	Column Number						
1	2	3	4	5	6	7	8
Type	**Chromium**	**Colbalt**	**Lead**	**Manganese**	**Nickel**	**PM10**	**Notes**
14Mn-4Cr	1.39E+01	ND	ND	2.32E+02	1.71E+01	8.16E+01	
E110	2.00E-02	ND	ND	2.02E+01	1.12E+00	2.08E+01	
E11018	9.69E+00	ND	ND	1.38E+01	1.02E+00	5.70E+01	
E308	5.24E+00	1.00E-02	ND	3.46E+00	1.84E+00	1.08E+01	1
E310	2.53E+01	ND	2.40E-01	2.20E+01	1.96E+00	1.51E+01	
E316	9.70E+00	ND	ND	5.90E+00	9.30E-01	1.00E+01	
E410	ND	ND	ND	6.85E+00	1.40E-01	1.32E+01	
E6010	3.00E-02	ND	ND	9.91E+00	4.00E-02	2.56E+01	
E6011	5.00E-02	1.00E-02	ND	9.98E+00	5.00E-02	3.84E+01	
E6012	ND	ND	ND	ND	ND	8.00E+00	
E6013	4.00E-02	1.00E-02	ND	9.45E+00	2.00E-02	1.97E+01	2
E7018	6.00E-02	1.00E-02	ND	1.03E+01	2.00E-02	1.84E+01	2
E7024	1.00E-02	ND	ND	6.29E+00	ND	9.20E+00	
E7028	1.30E-01	ND	1.62E+00	8.46E+00	ND	1.80E+01	
E70S	1.00E-02	1.00E-02	ND	3.18E+00	1.00E-02	5.20E+00	
E70T	4.00E-02	ND	ND	8.91E+00	5.00E-02	1.51E+01	
E71T	2.00E-02	2.00E-02	ND	6.62E+00	4.00E-02	1.22E+01	
E8018	1.70E-01	ND	ND	3.00E-01	5.10E-01	1.71E+01	
E9015	ND	ND	ND	ND	ND	1.70E+01	
E9018	2.12E+00	ND	ND	7.83E+00	1.30E-01	1.69E+01	
ECoCr	ND	ND	ND	ND	ND	2.79E+01	
EM12K	ND	ND	ND	ND	ND	5.00E-02	
ENi-Cl	ND	ND	ND	3.90E-01	8.90E+00	1.82E+01	
ENiCrMo	4.20E+00	ND	ND	4.30E-01	2.47E+00	1.17E+01	
ENi-Cu	ND	ND	ND	ND	ND	1.01E+01	
ENi-Cu-2	ND	ND	ND	2.12E+00	4.23E+00	ND	
ER1260	4.00E-02	ND	ND	ND	ND	2.05E+01	
ER316	5.28E+00	ND	ND	2.45E+00	2.26E+00	3.20E+00	
ER5154	1.00E-01	ND	ND	3.40E-01	ND	2.41E+01	
ERNiCrMo	3.53E+00	ND	ND	7.00E-01	1.25E+01	3.90E+00	
ERNiCu	1.00E-02	ND	ND	2.20E-01	4.51E+00	2.00E+00	2
Average	**3.46E+00**	**1.17E-02**	**9.30E-01**	**1.57E+01**	**2.72E+00**	**1.84E+01**	**3**

Notes:

A Source: AP-42, 12.19 Electric Arc Welding, 1/95, Table 12.19-1 and 19-2
B For metals: pounds of metal emitted per 10,000 pounds of electrode consumed
C For PM10: pounds of PM10 emitted per 1,000 pounds of electrode consumed
D "ND" denotes "No Data."

1 AP-42 lists several emission factors for E308. This is due to several different welding processes that exist. Of the emission factors listed, the maximum emission factor is selected for conservative results.
2 Value listed is <0.01. 0.01 was used since it is the upper bound.
3 Average is used where there is no emission factor information provided for a particular welding rod.

PRODUCTION RATIOS (What was used compared to last year - OU is best indicator for what was used)

Reportable TRI Chemical	Otherwise Use	CY09	CY10	CY11	CY11/CY10 Ratio
AMMONIA	chem usage	0.00	0.00	0.00	0.00
CHLORINE	chem usage	0.00	0.00	7,775.67	0.00
HYDRAZINE	chem usage	0.00	28,301.11	19,866.00	0.70
LEAD	firing range	0.00	441.57	380.10	
	welding rods	0.00	0.00	0.00	
	total	0.00	441.57	380.10	0.86
LEAD COMPOUNDS	fuel	0.00	0.02	0.00	
	firing range	0.00	0.28	0.24	
	total	0.00	0.30	0.24	0.80
PACS	fuel	0.00	0.31	3.39	10.94
NAPTHELENE	fuel	0.00	172.39	885.08	5.13
ZINC COMPOUNDS	chem usage	0.00	0.00	0.00	0.00
ZINC	chem usage		0	0.00	
	firing range	0.00	38.04	32.85	
	welding rods	0.00	0.47	0.34	
	total	0.00	38.51	33.19	0.86

Notes:

1 OU values taken from L:\CY 11\Nuclear TRI Files\SQN\ Thresholds\SQN CY11 TRI Thresholds.xlsx

2 Most CY09 values unknown - Form A submittal or totals only from NPG