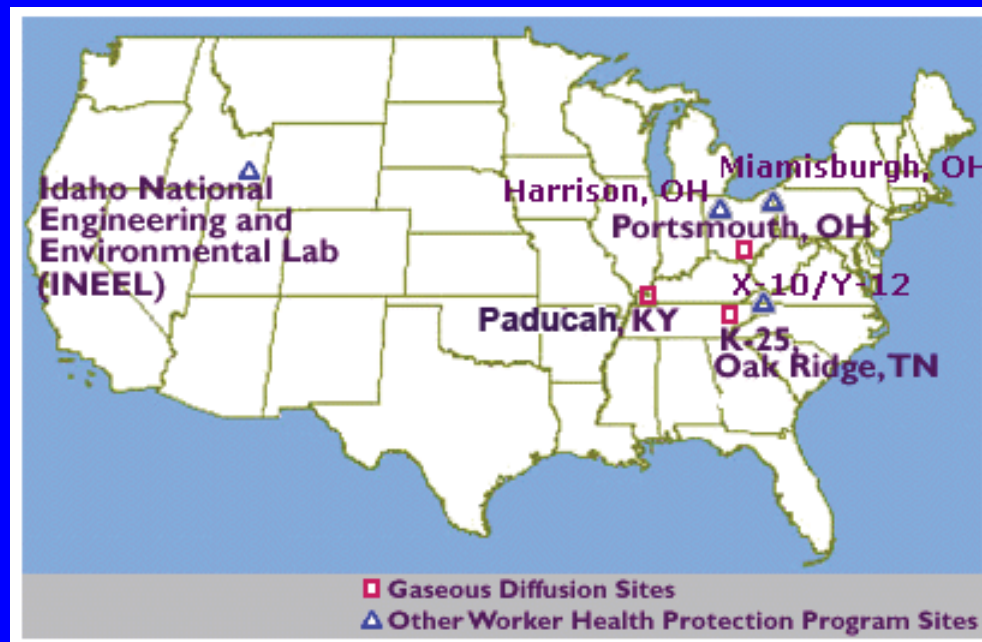




The Worker Health Protection Program



The Worker Health Protection Program



United Steelworkers, ORNL/Y-12 ATLC, Fernald ATLC
Queens College, City University of New York
Creative Pollution Solutions, Inc.

1993 Defense Authorization Act Section 3162

Requires DOE to:

“establish and carry out a program **for the identification and ongoing medical evaluation** of current and former Department of Energy employees who are subject to **significant health risks** as a result of exposure of such employees to hazardous or radioactive substances during such employment”

**Worker Health Protection Program
USW SITES
(4/30/1999-9/30/2008)**

WHPP SITE	Total No. of exams	No. of Initial exams	No. of re-screen exams	No. of exams, Jan-Oct 2008
3 Gaseous Diffusion Sites:	11,677	10,334	1,343	787
Paducah (1999->)	3,271	2,859	412	286
Portsmouth (1999->)	3,830	3,272	558	253
Oak Ridge/ K-25 (1999->)	4,576	4,203	373	248
INL (2000->)	3,847	3,472	375	317
Mound (2006->)	867	867	N/A	175
USW WHPP TOATAL	16,391	14,673	1,718	1,279

Worker Health Protection Program ATLC & Fernald Medical Screening Program

(X10/Y12: 5/17/2005-9/30/2008
Fernald: 7/13/2006-9/30/2008)

WHPP SITE	# of people who have completed exams	# of exams Jan-Oct 2008
X-10	888	236
Y-12	1,960	301
Fernald	564	117
Total	3,412	654

**Worker Health Protection Program
Summary of Findings for All USW sites
(from 4/30/99 through 9/30/2008)**

Finding	No. of Exams	No. of People with condition	% of People with condition
Asbestos-related CXR finding	16,225		
Parenchyma only		203	1.3
Pleura only		1,225	7.6
Parenchyma and Pleura		59	0.3
Total Asbestos Disease		1,487	9.2
Chronic obstructive lung disease	16,391		
Chronic bronchitis		1,801	11
Emphysema		466	2.8
Hearing loss	14,133	9,221	65
Beryllium LPT	15,952		
Single abnormal		421	2.7
Spirometry pattern	16,071		
Restrictive		2,469	15.4
Obstructive		1,850	12
Mixed		1,036	6.4

**Worker Health Protection Program
Summary of Findings for X-10/Y-12 combined
(from 5/17/05 through 9/30/08)**

Finding	Number Screened	# with condition	% with condition
Asbestos-related CXR finding	2760		
Parenchyma only		31	1.1
Pleura only		217	7.9
Parenchyma and Pleura		10	0.4
Total Asbestos Disease		258	9.4
Chronic obstructive lung disease	2848		
Chronic bronchitis		418	14.7
Emphysema		140	4.9
Hearing loss	2728	1624	59.5
Beryllium LPT	2813		
Single abnormal		129	4.6
Spirometry pattern	2732		
Restrictive		403	14.6
Obstructive		430	15.7

**Worker Health Protection Program
Summary of Findings for Fernald
(from 7/05/06 through 9/30/08)**

Finding	Number Screened	# with condition	% with condition
Asbestos-related CXR finding	554		
Parenchyma only		0	0
Pleura only		20	3.6
Parenchyma and Pleura		0	0
Total Asbestos Disease		20	3.6
Chronic obstructive lung disease	564		
Chronic bronchitis		30	5.3
Emphysema		6	1
Hearing loss	559	148	26.4
Beryllium LPT	431		
Single abnormal		4	0.9
Spirometry pattern	548		
Restrictive		54	9.9
Obstructive		40	7.3

WHPP Beryllium Testing Results through 2-28-07

<i>Facility</i>	K-25	*Paducah	*Portsmouth	INL	X-10	Y-12	Fernald	Mound
# Individual s tested (at least one result)	3967	2180	2730	2930	484	1199	208	411
Single abnormal	202 (5.1%)	64 (2.9%)	37 (1.4%)	67 (2.3%)	16 (3.3%)	67 (5.6%)	0	12 (2.9%)
Double abnormal	76 (1.9%)	16 (0.7%)	7 (0.3%)	18 (0.6%)	4 (0.8%)	20 (1.7%)	0	0

**Worker Health Protection Program
USW/Queens College**

**Results of Re-screening Participants
(through 9/08)**

Site	Portsmouth	Paducah	INL	K-25	TOTAL
No. of People Re-screened	558	412	375	373	1718
Pleural dx only (no. and %)	24 (4.5)	15 (3.8)	19 (5.4)	10 (3.1)	68 (4.1)
Parenchymal dx (no. and %)	14 (2.5)	2 (0.5)	4 (1.1)	2 (0.5)	22 (1.3)
BeLPT (no. and %)	1 (0.2)	6 (1.5)	1 (0.3)	3 (0.8)	11 (0.6)

Early Lung Cancer Detection Program ORNL and Y-12 Workers

August 6th, 2006 to October 31, 2008

Site	Number of People Enrolled	Number of People with Suspicious Nodules	Number of Lung Cancer Cases	Number of Early Lung Cancers*
ORNL	597	12	4	1 (25%)
Y-12	1694	13	5	5 (100%)
TOTAL	2291	25	9	6 (67%)

*Early cancer is defined as Stage I or II non-small cell, or limited small cell.

Early Lung Cancer Detection Program, ORNL and Y-12

August 6th, 2006 to October 31, 2008

Lung Cancers Detected on Initial vs. Follow-up Scan(s)

	Number of Baseline Scans	Number of Lung Cancers on Baseline or Follow-up	Number of Annual Scans	Number of Lung Cancers on Annual or Follow-up	Total Lung Cancers
ORNL	572	3	371	1	4
Y-12	1560	4	1231	1	5
TOTAL	2132	7	1602	2	9

Early Lung Cancer Detection Program (ELCD)

ORNL and Y-12 Workers

August 6th, 2006 to October 31, 2008

Stage of Lung Cancers Detected Through the ELCD

Stage I	6	67 %
Stage II	0	0%
Limited stage: small cell carcinoma	0	0 %
Stage III or IV	3	33%
TOTAL	9	100%

Early Lung Cancer Detection Program, ORNL and Y-12

August 6th, 2006 to October 31, 2008

Lung Cancers Detected on Initial vs. Follow-up Scan(s)

	Number of Baseline Scans	Number of Lung Cancers on Baseline or Follow-up	Number of Annual Scans	Number of Lung Cancers on Annual or Follow-up	Total Lung Cancers
TOTAL	2132	7	1602	2	9

Early Lung Cancer Detection Program, ORNL and Y-12

August 6th, 2006 to October 31, 2008

Suspicious Nodules and Lung Cancers
Detected on Initial vs. Follow-up Scan(s)

	<u>New</u> on Baseline	<u>Growth</u> on Baseline FU	<u>New</u> on Annual	<u>Growth</u> on Annual FU	Total
Suspicious Nodules	14	6	4	1	25
Lung Cancers	5	2	2	0	9

Early Lung Cancer Detection Program (ELCD)

ORNL and Y-12 Workers

August 6th, 2006 to October 31, 2008

Other Cancers Detected Through the ELCD

Kidney	4
Thyroid	3
TOTAL	7

Early Lung Cancer Detection Program Multi-site ELCD 2009

- **Mobile unit will travel between Mound, Fernald, Portsmouth and Paducah**
- **K-25 workers will use CT scanner at ATLC office**
- **Selected two new sites for Mound and Fernald.
Site set-up is underway.**
- **Images will be sent to NY via T1 line, as we do for X-10/Y-12**
- **Expect to screen a total of 1500 thru multi-site program in year 1.**

Current ATLC ELCD Eligibility Criteria

≥ 45-85 YEARS OLD

≥ 50-85 YEARS OLD

**SCARRING OF LUNG OR PLEURA
RELATED TO ASBESTOS/SILICA**

**SMOKING HISTORY OF AT
LEAST 10 PACK-YEARS AND
QUIT 20 YEARS AGO OR LESS**

AT LEAST ONE POSITIVE Be LPT

**AND/ OR
DOE PROD., MAINT. OR LAB
WORKER ≥ 2 YEARS
(EXPOSURE BEGAN PRIOR TO 1992)**

**AND
% PREDICTED FEV₁ >40%,
NO CA UNDER ACTIVE
OBSERVATION**

**AND
% PREDICTED FEV₁ >40%,
NO CA UNDER ACTIVE
OBSERVATION**

GDP ELCD Eligibility Criteria

ANY AGE	45 – 49 YEARS OLD	<u>≥</u> 50 YEARS OLD
SCARRING OF LUNG or PLEURA RELATED TO ASBESTOS/SILICA	SMOKED FOR <u>≥</u> 20 YEARS AND QUIT 15 YEARS AGO OR LESS	SMOKED FOR <u>≥</u> 10 YEARS AND QUIT 15 YEARS AGO OR LESS
AT LEAST ONE POSITIVE Be LPT	AND/ OR DOE PROD., MAINT. OR LAB WORKER <u>≥</u> 5 YEARS <small>(EXPOSURE BEGAN PRIOR TO 1986)</small>	AND/ OR DOE PROD., MAINT. OR LAB WORKER <u>≥</u> 5 YEARS
AND % PREDICTED FEV ₁ >40%, NO CA UNDER ACTIVE OBSERVATION	AND % PREDICTED FEV ₁ >40%, NO CA UNDER ACTIVE OBSERVATION	AND % PREDICTED FEV ₁ >40%, NO CA UNDER ACTIVE OBSERVATION

Early Lung Cancer Detection Program
Gaseous Diffusion Plant Workers

November 1st, 2000 – July 31st, 2006

Site	Number of People Scanned	Total Lung Cancers Detected	Number of Lung Ca Detected at Stage I, Stage II or Limited Small Cell Cancer
Paducah, Kentucky	1,738	8	7 (88%)
Portsmouth, Ohio	2,048	18	14 (78%)
Oak Ridge, Tennessee	2,438	19	15 (79%)
TOTAL	6,224	45	36 (80%)

Early Lung Cancer Detection Program

Gaseous Diffusion Plant Workers

November 1st, 2000 – July 31st, 2006

Number of Lung Cancers Detected on Initial vs. Follow-up Scan(s)

	Number of Initial Scans	Number of Lung Cancers on Initial Scan or f/u Scan	Number of Incidence Scans	Number of Lung Cancers on Incidence Scan or f/u Scan	Total Lung Cancers
PAD	1,738	5	911	3	8
POR	2,048	12	1,031	6	18
OAK	2,438	16	1,174	3	19
TOTAL	6,224	33	3,116	12	45

Early Lung Cancer Detection Program (ELCD)

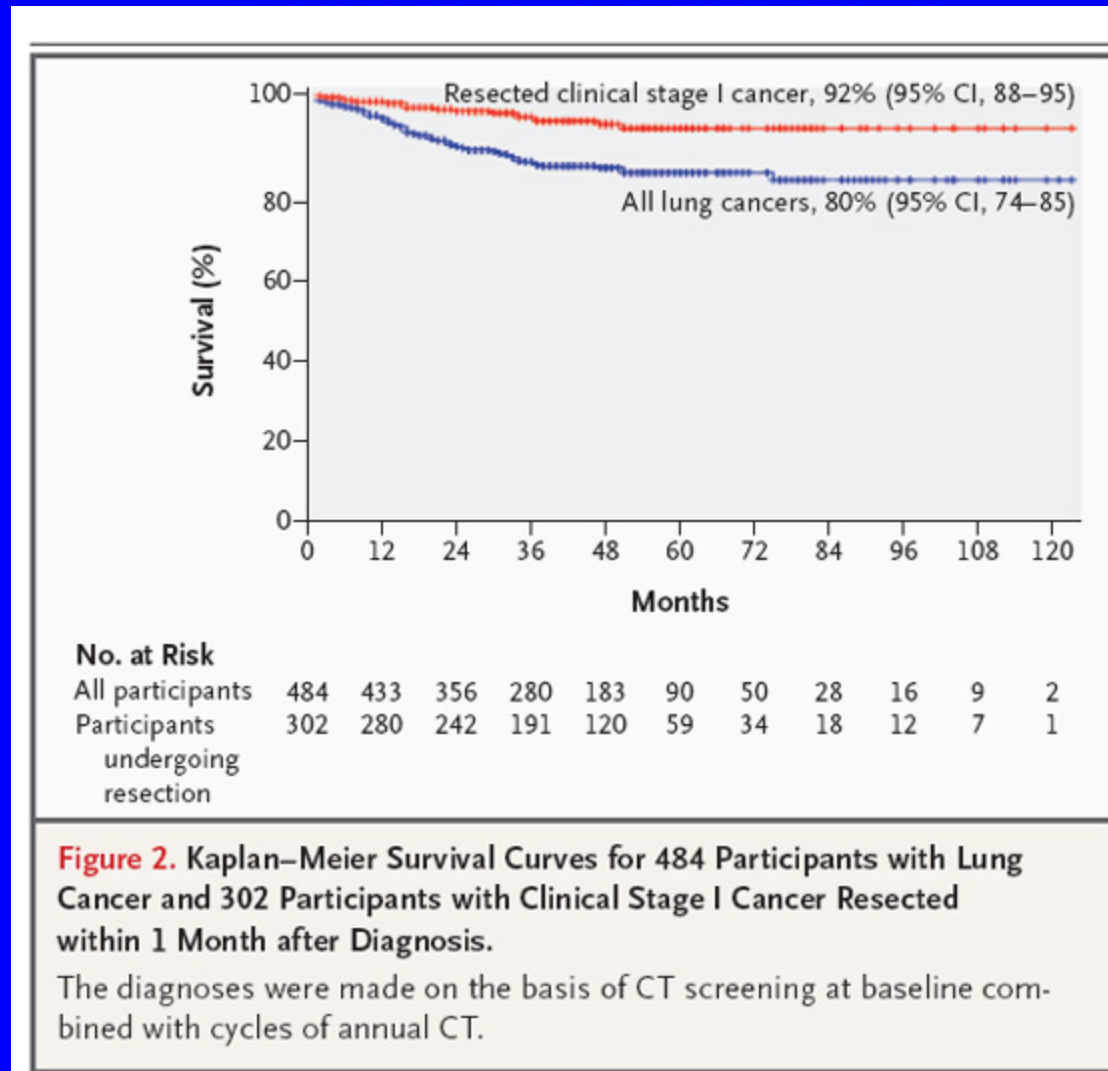
Gaseous Diffusion Plant Workers

November 1st, 2000 – July 31st, 2006

Stage of Lung Cancers Detected Through the ELCD

Stage I	26	58%
Stage II	6	13%
Limited stage: small cell carcinoma	4	9%
Stage III or IV	9	20%
TOTAL	45	100%

Ten Year Survival for 484 Participants of Early Lung Cancer Action Program with Lung Cancer Detected on Screening CT Scan.



Source: The International Early Lung Cancer Action Program Investigators. Survival of Patients with Stage I Lung Cancer Detected on CT Screening. *N Engl J Med*;355;1763-71.