

#### WELLMAN THERMAL SYSTEMS CORPORATION

DECOMMISSIONING FUNDING PLAN

# Michael Wample

MICHAEL WAMPLER

(RADIATION SAFETY OFFICER) R&D LAB MANAGER

WRITTEN 7/23/91

Signed and Sworn Before me on this

25th day of Ju 1 Darbara Notary Public

RA 11-29-93

Commission Expires

Wellman Thermal Systems Corporation One Progress Road, Shelbyville, IN 46176 317-398-4411 TWX810-260-2616 Telefax 317-392-5275 9804280096 980420 PDR FBIA HANSEN98-65 PDR

3 ARBARA ANN BRAH NOTARY PUBLIC STATE OF INDIANA SHELBY COUNTY MY COMPRISSION EXP. NOV 29,1993

CONTROL NO. 0 00 7 6

### TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	SPECIFIC ACTION	2,3
III.	COST ESTIMATING TABLES	4

APPENDIX F

. . . .

CONTRCL NO. 0 90 7 8

PAGE

#### SECTION I.

\*

#### INTRODUCTION

This document is in reference to activities covered by NRC License #13-20028-01. All definitions and terms used in this document are taken from 10CFR30.4 Definitions, or other NRC Regulations as cited.

This document has been written to describe in a general way those activities and costs which Wellman Thermal Systems Corporation will incur when decommissioning its radioactive facility located at One Progress Road, Shelbyville, Indiana.

This document has been prepared to address Wellman's request to the NRC for an exemption from the requirements to obtain a Decommissioning Financial Assurance Mechanism.

#### SECTION II.

#### SPECIFIC ACTION

The Wellman radioactive facility is contained in a room located at One Progress Road, Shelbyville, Indiana. The facility can contain up to 40 curies of Krypton 85 gas in an ISOVAC Engineering Inc. Radiflo Mark IV Unit (Serial #6139). In addition, this facility may house up to two sealed source vials of Krypton 85 not to exceed 1 millicurie per sealed source.

Normal control of the by-product material is in accordance with the terms and conditions of Wellman's NRC license. A key element to this control is the totally enclosed manner in which the isotope is used in the Radiflo unit. Another control element is the externally vented, local exhaust system, integrally connected to the Radiflo Mark IV unit. Routine surveys, personnel monitoring, and instructions to the personnel are other important elements of control of the Krypton 85 gas and sealed sources.

Specific actions necessary to completely and effectively decommission this facility are described as follows:

2

CONTROL NO. 0 00 7 6

#### A. DISPOSAL OF KRYPTON 85 GAS

In normal operation of the Mark IV unit, radioactive gas is discharged to the environs each time the equipment is cycled thru a complete activation cycle.

Final disposal of the Krypton 85 gas remaining in the unit, in the event of decommissioning, will be periodically diluted venting to the environs.

#### B. DISPOSAL OF KRYPTON 85 SEALED SOURCES

At the time of decommissioning of the Mark IV unit, all Krypton 85 sealed source vials at the facility located at One Progress Road, Shelbyville, Indiana will be returned to ISOVAC Engineering Inc. for disposal. In the event ISOVAC is no longer an approved NRC licensed vendor, a similar type of NRC licensed vendor will be contracted to perform this function.

#### C. ASSURANCE OF FACILITY/PERSONNEL SAFETY

During gas disposal and after the conclusion of Isotope usage, a radiation survey of the premises will be carried out. This survey will be performed using a survey meter in use at Wellman, which is maintained in a calibrated state.

#### D. NRC INVOLVEMENT

When necessary by license conditions, all conditions of NRC regulation 10CFR30.36 Expiration And Termination Of Licenses will be met.

#### SECTION III.

#### COST ESTIMATE WORKSHEETS

An estimate of the cost to complete the specific actions described in Section II., A-D of this document has been prepared.

This estimate was based on current labor, material and utility rates at the time this document was prepared.

The cost estimate for decommissioning the Wellman Thermal Systems Corporation facility at One Progress Road, Shelbyville, Indiana is \$530.30. The method for calculating this estimate is stated on the sheets attached to this document titled "Appendix F, Cost Estimating Tables". These sheets were taken from NRC regulatory guide 3.66.

Some changes have been made to the suggested format indicated on the worksheets. Among these is that labor costs were based on hourly wages.

Wellman's estimate of decommissioning cost will be updated and/or re-estimated every five years or whenever our license is reviewed for renewal.

## APPENDIX F

## COST ESTIMATING TABLES

# 1. Planning and Preparation

Table 1

Tas	<u>sk</u>	Supervisor	Work Day Foreman	ия <u>Н.Р.</u>	Clerical	Sub Total	Total** Cost
1.	Preparation of Documentation for Regulatory Agencies		0.250			35.13	35.13
2.	Submittal of Decommissioning Plan to NRC when required by 10 CFR 30.36(c)(2), 40.42(c)(2), or 70.38(c)(2)*		0.750		.250	105.40 19.85	125.25
3.	Development of Work Plans			0.125		17.57	17.57
4.	Procuring of Special Equip- ment			0.125		17.57	17.57
5.	Staff Training						
6.	Characterization of Radiological Condition of the Facility (Including soil and tailings analysis or ground- water analysis, if applicable)						
7.	Other					140 53	
8.	Total		1.00	.250	.250	35.13	195.51

\* For assistance in preparation of cost estimate for 10 CFR Part 72, consult NRC Office of Nuclear Material Safety and Safeguards.

\*\* Cost data based on Table 2 data using hourly rate is based on 260 workdays per year.

## Table 2

Position	Unit Cost for Basic Salaries (\$/yr)	Workers Overhead Rate (%)	Worker Cost/year	Cost/Day	
Supervisor Foreman -Manager	28,325	29%	36,539	140.53	
Technician S.O.)Health Physicist	24,000 28,325	29% 29%	30,960 36,539	119.08 140.53	
Clerical Other	16,000	29%	20,640	79.38	

## 2. Decontamination and/or Dismantling of Radioactive Facility Components\*

R

	No.	Dimensions		No.	Dimensions
Glove Boxes Fume Hood Hot Cells Lab Benches Sink and Drain	000000		Amount of Floor Space Ventilation Ductwork Amount of Wall Space Other	00000	(m <sup>2</sup> ) (m) (m <sup>2</sup> )

#### Table 3

Work Days

Task	Super- visor	Fore- man	Tech- nicians	<u>H.P.</u>	Crafts- men	La- borer Total	Total Cost
<ol> <li>Decon/Dis- mantle Major Components and/or Proc- essing and Storage Tanks</li> </ol>							00
2. Decon/Dis- mantle Laboratories, Fume Hoods, Glove Boxes, Benches, etc.						^ <u></u>	0

 \*Indicate whether component is to be decontaminated to unrestricted release levels or packaged and disposed of at a low-level waste site.

# Table 3 (continued)

# Work Days

Ta	sk	Super- visor	Fore- man	Tech- nicians	<u>H.P.</u>	Crafts- men	La- borer Total	Total Cost
3.	Decon/Dis- mantle Waste Areas							0
	<ul> <li>Radwaste Areas</li> <li>Scrap Recovery Areas</li> <li>Other</li> </ul>							
4.	Decon/Dis- mantle Service Facilities			Sado il Rozzalla Salancia (Sala				0
	<ul> <li>Maintenance Shop</li> <li>Decontaminatio Areas</li> <li>Ventilation Systems</li> <li>Other</li> </ul>	n						
5.	Decon/Dis- mantle Waste Treatment Facilities and Storage Areas on the Site (Including exhur and package contaminated soil and tail- ings, if any)	n.e						0
	<ul> <li>Fluoride Lago</li> <li>Nitrate Lagoo</li> <li>CaF2 Waste Recovery</li> <li>Ground Water Restoration</li> <li>Other</li> </ul>	ons ns						

CONTRALNO. 1. T.

٠.

# Table 3 (continued)

# Work Days

Task	Super- visor	Fore- man	Tech- nicians	<u>H.P.</u>	Crafts- men	La- Sub borer Total	Total Cost
<ol> <li>Monitor for compliance, reclean and remonitor, if necessary</li> </ol>		0.5	0.25	0.5		70.27 29.77 70.27	<u>170.</u> 3
<ol> <li>Other (e.g., contractor fees)</li> </ol>		-					ater vale had been all call
Equipment/Supply		Qua	Table 4 antity		Cost		
		_			0		
3. Packaging, S	ihioping, ar	d Dispo	sal of Ra	dioact	ive Wastes		
Waste Volu Type (m <sup>3</sup> Sealed Sources .03	ume No. c ) <u>Conta</u> 3 1	of	Table 5 Type of Contain Paper	ers Box	Unit Cost of <u>Container</u> 1.00	Cost of <u>Container</u> 1.00	
Total .0.	3					1.00	
Distance Shippe Unit cost for s Additional char Overweight Surcharges	d hipment ges Un	it	Table 6 22 N N N	00 /A /A /A	(miles) (%/mile (\$/mile (\$/mile	California /truckload) e)	
Waste No. o <u>Type Shipm</u> Se <u>aled</u> Sourc <u>es</u>	f Co ents Sh 1 20	st for ipping 0.00	Distan Shipp 2200	nce ed mi]es	Surcharge	Transport Cost 20.00	tation
Total							

C:::::::

Table 7 (\$/m<sup>3</sup>) Burial Charges Surcharges Per container (\$) (\$/m<sup>3</sup>) Disposal Unit Waste Burial Cost of Burial Type Volume Burial Surcharge Cost Total N/A

4. Restoration of Contaminated Areas on Facility Ground

## Table 8

		Work 1	Days			Total
Task	Supervisor	Foreman	H.P.	Clerical	Total	Cost
Backfill and Restore						
0100		All the state of t	States and states and		all sub-communit	
				*****	*****	-
	Balling and the second second	-				N/A

## 5. Final Radiation Survey

١

#### Table 9

		Work	Days		Sub	Total
Task	Supervisor	Foreman	<u>H.P.</u>	Clerical	Total	Cost
Personal Survey			0.125		17.57	17.57
Report		-		0.250	19.85	19.85
Total			0.125	0.250		37.42

# 6. Site Stabilization, Long-Term Surveillance (if applicable)

	]	Table 10				
Task	Supervisor	Work I Foreman	Days <u>H.P.</u>	Clerical	Total	Total Cost
						-
			-			
						N/A

## COST ESTIMATE SUMMARY APPENDIX F

TASK	ŧ		PAGE	
1	PLANNING & PREPARATION	4	F1	\$195.51
2.	DE CONTAMINATION/DISMAN	NTLE	F2-F4	170.31
3.	PACKAGING, SHIPPING &	DISPOSAL	F4-F5	21.00
4.	RESTORATION		F5	N/A
5.	FINAL RADIATION SURVE	х	F5	37.42
6.	SITE STABILIZATION		F6	N/A
	s	UB TOTAL		\$424.24
	+	25% CONTINGENCY	FUND	106.06
	-	14 717		\$530.30



DATE: July 25, 1991

copy: F. T. Walton M. W. Wampler

TO: D. C. Heavin Manager Industrial Relations

FROM: D. E. Duba, Senior Vice President Wellman Thermal Systems Corporation

SUBJECT: Radiation Safety Officer

#### 

This letter confirms for corporate records that Michael W. Wampler is designated as Corporate Radiation Safety Officer for Wellman Thermal Systems Corporation and Wellman Automotive Products Inc. Mike has been continuously the RSO designee since July 1978.

Dave Duba

David E. Duba Sr. V.P.

Signed and Sworn Before me on this  $25^{-1}$  day of -July 1991 .

Notary Public Thigh

Print Print

11-29-93 Commission Expires

BARBARA AMI RIGH MOTARY PUBLIC STATE OF INDIANA SHELBY COUNTY MY COMMISSION EXP. NOV. 29, 1993

DED 172591/15 Wellman Thermal Systems Corporation One Progress Road, Shelbyville, IN 46176 317-398-4411 TWX810-260-2616 Telefan 317-392 5275

COLORCE 10.