# AECL EACL

# Strategic Initiatives Document

Federal Nuclear Legacy Liabilities Management Plan

Conceptual Long-Term Technical Strategy for the Management of Nuclear Legacy Liabilities on AECL Sites: Five Year Operational Implementation Plan – Chalk River Laboratories

3600-01620-067-003 Revision 0

2006 February

# UNRESTRICTED

© Atomic Energy of Canada Limited

2251 Speakman Drive Mississauga, Ontario Canada L5K 1B2

#### Fevrier 2006

# ILLIMITÉ

© Énergie atomique du Canada limitée

2251, rue Speakman Mississauga (Ontario) Canada L5K 1B2

# AECL EACL

# Strategic Initiatives Document

Federal Nuclear Legacy Liabilities Management Plan

Conceptual Long-Term Technical Strategy for the Management of Nuclear Legacy Liabilities on AECL Sites: Five Year Operational Implementation Plan – Chalk River Laboratories

.

# 3600-01620-067-003 Revision 0

Prepared by Rédigé par

B.A. Lange Director, Waste Management and

Decommissioning Operations

G.M. Dolinar Manager, LMU Strategic Development and Assessments

Approved by Approuvé par

abouchone of the W.C.H. Kupferschmidt

W.C.H. Kupterschmidt General Manager, Decomissioning, Waste Management and Site Projects

Fevrier 2006

# ILLIMITÉ

© Énergie atomique du Canada limitée

2251, rue Speakman Mississauga (Ontario) Canada L5K 1B2

Reviewed by Examiné par

2006 February

Canada Limited

UNRESTRICTED

2251 Speakman Drive

Mississauga, Ontario

Canada L5K 1B2

© Atomic Energy of



# **Release and Revision History**

#### Liste des documents et des révisions

0939B Rev. 13

#### Document Details / Détails sur le document

Title Titre

Federal Nuclear Legacy Liabilities Management Plan

#### Release and Revision History / Liste des documents et des révisions Revision Prepared by Reviewed by Release Purpose of Release; Details of Rev./Amendement Approved by Document Révision Obiet du document: détails des rév. ou des modif. Rédigé par Examiné par Approuvé par No./Nº No./N° Date Date Document Issued for Review W.C.H. 2005 Jan D1 B.A. Lange G.M. Dolinar Kupferschmidt W. Kupferschmidt D.Charlesworth D.J. Smith C.A. Fahey G. Koroll R. Janzen Document Issued for 2<sup>nd</sup> Review Incorporating Revisions G.M. Dolinar W.C.H. 2005 Oct D2 B.A. Lange Required for Submission to the CNSC (including reduction in Kupferschmidt scope to include only CRL) W. Kupferschmidt G. Archinoff P. J. Fehrenbach S. Lawton G. Sotirov G. Koroll R. Janzen C. Purdy Comments addressed and document issued W.C.H. 2006 Feb **R**0 B.A. Lange Kupferschmidt DCS/RMS Input / Données SCD ou SGD Sheet Feuille Rel. Proj. Project Serial No. Of Unit No.(s) Ň SI Tranche n<sup>°</sup> Proj. conn. Projet Section Série De 1 1

# UNRESTRICTED ILLIMITÉ

Total no. of pages N<sup>bre</sup> total de pages

AECL EACL

#### UNRESTRICTED

3600-01620-067-003 Page i

#### **TABLE OF CONTENTS**

#### SECTION

#### PAGE

1.	INTRODUCTION1
2.	KEY FACTORS AND CONSIDERATIONS IN THE
2.	ESTABLISHMENT OF THE FIVE YEAR PLAN (CRL)
3.	PLANNING ASSUMPTIONS AND STRATEGIC ELEMENTS
	UNDERLYING THE FIVE YEAR PLAN (CRL)
3.1	General2
3.1.1	Future Refinements to the Five Year Plan (CRL)2
3.1.2	Funding
3.1.3	Optimized Approach to the Management of the Nuclear Legacy
	Liability
3.1.4	Role of Enabling Facilities
3.1.5	Links with the Nuclear Historical Liability Program
3.1.6	Required Disposal Facilities
3.1.6.1	Near Surface Disposal Facility
3.1.6.2	Intermediate Depth Geological Disposal Facility4
3.1.6.3	Deep Geological Disposal Facility – National Used Fuel Disposal
	Facility
3.1.6.3.1	Availability of a National Used Fuel Disposal Facility4
3.1.6.3.2	Waste Streams for the National Used Fuel Disposal Facility4
3.1.6.4	Repatriation of HEU to the United States4
3.1.7	Nuclear Waste Management Organization – National Used Fuel
	Disposal Facility
3.1.8	Interim Storage
3.1.9	Double Handling of Wastes
3.1.10	Non-Radioactive Contaminants
3.1.11	Scope of the Nuclear Legacy Liability on the CRL Site
3.1.12	Public Consultation Process
3.1.13	Management of Uncertainties Associated with the Five Year Plan
	(CRL)
3.1.14	License Holder
3.1.15	Storage with Surveillance Periods
3.2	Chalk River Laboratories (CRL) Site
3.2.1	CRL Waste Management Areas (WMAs)6
3.2.2	Availability of Support Facilities and Programs7
3.2.3	NRU Shutdown7
3.2.4	CRL Operational Life7
3.2.5	CRL Institutional Control Period7
3.2.6	Treatment of Contaminated Groundwater7
3.2.7	Remediation of Contaminated Sediments7

#### UNRESTRICTED

3600-01620-067-003 Page ii

#### TABLE OF CONTENTS

# SECTION

# PAGE

3.2.8	CRL Special Burials of Waste	.7
3.2.9	Coordination of Operational and Decommissioning Activities	.8
3.2.10	CRL Decommissioning Model	
3.2.11	CRL Enabling Facilities	
3.2.11.1	General	
3.2.11.2	Facilities	.8
3.3	In-Situ Disposal	.9
4.	IMPLEMENTATION PLAN	.9
4.1	Principle Components of the Five Year Plan (CRL)	
4.1.1	Further Development of the Strategy	.9
4.1.2	CRL Waste Management Areas1	0
4.1.2.1	Legacy Waste Areas (Affected Lands) - Monitoring and	
	Surveillance1	
4.1.2.2	WMA Evaluation and Planning1	0
4.1.2.3	WMA Remediation Projects1	
4.1.2.3.1	South Swamp Plume Treatment Facility1	.1
4.1.2.4	Groundwater Plume Treatment – Operation1	1
4.1.2.5	Tile Hole Remediation1	
4.1.2.6	Fuel Packaging and Storage1	1
4.1.2.7	Solid Waste Storage Facilities1	1
4.1.2.8	Waste Analysis Facility1	1
4.1.2.9	Solid Waste Processing Facilities1	2
4.1.2.10	Long-Term Waste Management Facilities1	2
4.1.2.11	Hot Cells Upgrades1	2
4.1.3	CRL Facilities and Structures1	3
4.1.3.1	Safe Shutdown1	3
4.1.3.2	Building Hazards Assessments1	3
4.1.3.3	Building Decommissioning1	3
4.1.3.4	Monitoring and Surveillance1	4
4.1.3.5	Building 204 Bays1	4
4.1.3.6	Heavy Water Upgrader1	4
4.1.3.7	NRX Phase 11	
4.1.3.8	Tank Preparation for Decommissioning1	4
4.1.3.9	Stored Liquid Waste Transfer and Operations1	4
4.1.3.10	Liquid Waste Storage Facility1	
4.2	Gantt Chart1	
5.	REFERENCES1	6

#### UNRESTRICTED

3600-01620-067-003 Page iii Rev. 0

#### **TABLE OF CONTENTS**

# SECTION

#### PAGE

#### APPENDICES

UNRESTRICTED 3600-01620-067-003 Page 1 Rev. 0

#### 1. INTRODUCTION

AECL has been the focus of the Government of Canada's nuclear research and development program for over 50 years. In addition, radioactive and other wastes from a variety of sources, including those associated with AECL's early operations, Canada's historic waste management program, Government departments, universities, hospitals, AECL's current operations, and private waste producers have been received, stored, and managed at the AECL sites.

Over the past several years, a strategy has been progressively developed by AECL (referred to as the conceptual technical strategy) for managing the nuclear legacy liabilities on AECL sites.

The purpose of the conceptual technical strategy was to develop an **optimized** technical approach for the long-term management of nuclear legacy liabilities on AECL sites that was not constrained by funding considerations, but which did take into account the realities of the limitations imposed by the availability of resources, regulatory approval processes, construction times, etc. It was further intended that the conceptual technical strategy serve as a baseline from which all planning documents of a similar type could be derived. Further to this end, it is important to note that the overall strategy is reflected in the Comprehensive Preliminary Decommissioning Plan for the CRL Site [1], which was recently submitted to the Canadian Nuclear Safety Commission.

The conceptual technical strategy was, by design, not detailed with respect to the specific activities that must be executed in managing the nuclear legacy liabilities. Therefore, it was decided that a document was required that would provide the details as to how the conceptual technical strategy would be actually implemented over a five year period, and that this plan would comprise the Five Year Operational Implementation Plan (referred to as the Five Year Plan). Furthermore, this Five Year Plan would be updated on a regular basis in order to reflect changes resulting from such considerations as (i) changes in the decommissioning scope, (ii) regulatory developments, and (iii) strategic developments, such as those associated with the Nuclear Waste Management Organization (NWMO).

This document represents the Five Year Plan as it applies to the Chalk River Laboratories (referred to as the Five Year Plan (CRL), and comprises two major components, (i) a set of planning assumptions and strategic elements that underlie the Five Year Plan (CRL) (Section 3.), and (ii) an implementation plan which includes a detailed Gantt chart showing the nature, timing, and duration of the activities that will be executed in the 5-year period.

In the context of this plan, the term "long-term management of nuclear legacy liabilities" can be taken as being synonymous with the term "decommissioning". Therefore, this document represents a decommissioning plan.

#### 2. KEY FACTORS AND CONSIDERATIONS IN THE ESTABLISHMENT OF THE FIVE YEAR PLAN (CRL)

In the conceptual technical strategy, AECL developed an optimized approach for decommissioning the Nuclear Legacy Liability that spans a period of approximately 70 years and takes into consideration the following factors which dictate the timing and duration of the decommissioning activities and initiatives: (presented in approximate order of importance):

- The reduction of health, safety, security, and environmental (HSSE) risks.
- Maintaining compliance with regulatory requirements.
- The availability of enabling facilities.
- The minimization of costs associated with activities that do not contribute substantially to the reduction of risks or liabilities.
- The reduction/minimization of financial burden on future generations.
- Maximizing the extent of synergistic activities.
- AECL business requirements (including operational cost savings).

The same factors drive the scope of activities associated with the Five Year Plan (CRL), but at this stage in the decommissioning program are predominately associated with the first two bullets.

#### 3. PLANNING ASSUMPTIONS AND STRATEGIC ELEMENTS UNDERLYING THE FIVE YEAR PLAN (CRL)

In order to properly formulate this Five Year Plan (CRL), a series of planning assumptions had to be made, the nature of which are discussed below. In addition, key strategic elements of the conceptual technical strategy are also presented. Many of these planning assumptions and strategic elements involve issues, circumstances, and conditions well beyond the immediate five-year period, but nonetheless are important considerations that underlie the Five Year Plan (CRL).

#### 3.1 General

#### **3.1.1** Future Refinements to the Five Year Plan (CRL)

The contents of this plan will need to be refined on an on-going basis as a result of inputs such as those arising from the Canadian Environmental Assessment Act (CEAA) and other public consultation processes. The frequency of revision will be dictated, in large measure, by the extent to which the planning assumptions presented in this section have changed. Of particular importance in the updating process will be documenting what has changed relative to the previous plan, and the rational and impacts associated with those changes.

#### 3.1.2 Funding

The nature and timing of the activities contained in this Five Year Plan (CRL) are based on the explicit assumption that funding will be made available to the extent identified in the AECL 2006/07 Corporate Plan.

#### 3.1.3 Optimized Approach to the Management of the Nuclear Legacy Liability

The primary consideration in establishing the optimized approach to the management of the nuclear legacy liabilities on the CRL site was that, internationally, accelerated decommissioning (i.e., reducing risks now rather than deferring action) represents optimization.

#### 3.1.4 Role of Enabling Facilities

The availability of enabling facilities (e.g., disposal facilities, processing facilities, storage facilities, etc) will play a formative role in the timing and duration of decommissioning activities.

Given the length of the decommissioning program, it is assumed that some of the enabling facilities will need to be periodically replaced and/or refurbished.

For the purposes of this document, the size, throughput, capacity, etc. of the enabling facilities have been based on conservative assumptions in order to ensure that they will be able to handle a relatively wide variety of possible scenarios that might develop during the actual implementation of the conceptual technical strategy.

#### 3.1.5 Links with the Nuclear Historical Liability Program

This scope of the liability upon which this strategy is based does not directly take into consideration initiatives associated with the nuclear historical liability program (e.g., the projects being undertaken by the Low Level Radioactive Waste Management Office). It is only concerned with the nuclear legacy liability associated with the CRL site.

Notwithstanding the above, some of the facilities that will be developed to address the nuclear legacy liability (e.g., a shallow rock cavity (SRC)/CRL Geological Disposal Facility (CGDF)) could well be used for wastes originating from the nuclear historical liability. However, at this point in time such facilities have not been sized or designed for this use in the conceptual technical strategy.

#### 3.1.6 Required Disposal Facilities

The radioactive wastes generated from managing the nuclear legacy liabilities at the CRL site, and which are not left *in situ*, will go to three types of repositories; (i) near surface (e.g., Intrusion Resistant Underground Structure (IRUS)), (ii) intermediate depth geological (e.g., a shallow rock cavity), and (iii) deep geological (e.g., a national used fuel disposal facility). IRUS and the shallow rock cavity (referred to as the CRL Geological Disposal Facility (CGDF)) will be located at the CRL site. The used fuel disposal facility will likely not be located at CRL, but this is only an assumption and not a conclusion as decisions surrounding the ultimate location will be determined through the process being conducted by the NWMO. While awaiting the

availability of these disposal facilities, decommissioning wastes will be stored in interim facilities, such as the shielded modular above ground storage (SMAGS) facility.

# 3.1.6.1 Near Surface Disposal Facility

IRUS is planned in addition to the CGDF because it can provide a near-term (7-10 years) means for the disposal of low-level wastes that currently exist.

#### 3.1.6.2 Intermediate Depth Geological Disposal Facility

The CRL Geological Disposal Facility (CGDF) will be capable of taking both low-level wastes (LLW) and intermediate-level wastes (ILW), and its availability by approximately 2020 is a key component in this strategy. The CGDF represents a longer-term and potentially more versatile solution for dealing with the disposal of radioactive wastes relative to the disposal capabilities provided by IRUS.

#### 3.1.6.3 Deep Geological Disposal Facility – National Used Fuel Disposal Facility

# 3.1.6.3.1 Availability of a National Used Fuel Disposal Facility

A national disposal/storage facility for fuel waste is assumed to be available in the period 2035 to 2065. Use of this facility in support of the strategy presented in this document will only occur in the period 2055 to 2065. (See also assumptions concerning the Nuclear Waste Management Organization).

# 3.1.6.3.2 Waste Streams for the National Used Fuel Disposal Facility

Low Enriched Uranium (LEU), Slightly Enriched Uranium (SEU), and Highly Enriched Uranium (HEU) that has undergone significant irradiation will be sent to the national disposal/storage facility. Unirradiated or slightly irradiated SEU and HEU will be down blended in preparation for being sent to the national disposal/storage facility.

# 3.1.6.4 Repatriation of HEU to the United States

HEU will not be returned to the United States under the arrangements of the USA Return of HEU Program. This assumption is being made to ensure that a conservative, but realistic, approach is being taken with respect to the amount of this type of waste that will need to be managed as part of the decommissioning program.

#### 3.1.7 Nuclear Waste Management Organization – National Used Fuel Disposal Facility

Assumptions surrounding the initiatives of the NWMO include:

- The recommended option for managing used fuel and fuel wastes will be disposal, but with intermediate long-term storage in a shallow rock cavity facility as dictated by the Adaptive Phased Management approach.
- There will be a single, centralized waste disposal/storage facility (the storage and disposal facility will be co-located).

- Waste Acceptance Criteria will be available by 2015.
- A significant proportion of the nuclear legacy liability fuel wastes associated with the conceptual technical strategy will require conditioning and re-packaging prior to acceptance in the disposal/storage facility.
- The disposal/storage repository will accept fuel related wastes (e.g., vitrified wastes) as well as spent fuel. The NWMO will not entertain scope, or make specific recommendations, associated with the disposal of low- and intermediate-level wastes.

#### 3.1.8 Interim Storage

Due to the uncertainties surrounding the availability of disposal facilities, interim storage at the CRL site will form a fundamental component of the conceptual technical strategy. Interim storage will be required in addition to that associated with the national used fuel disposal facility. Interim storage is a combination of both long-term storage and buffer storage. Long-term storage is required to bridge the gap until the various disposal facilities are available, and buffer storage is required as part of the waste handling process.

#### 3.1.9 Double Handling of Wastes

Operational concerns about the double handling of waste apply primarily to used fuel waste. This assumption is based on the low doses that are typically found for workers managing low and intermediate level wastes in the CRL Waste Management Areas.

#### 3.1.10 Non-Radioactive Contaminants

Non-radioactive contaminants are included in the scope associated with this plan.

#### 3.1.11 Scope of the Nuclear Legacy Liability on the CRL Site

The overall scope of the nuclear legacy liability on the CRL site that has been considered in the formulation of this plan includes the following:

- The entire configuration of the site as it exists as of 2005 January 01, plus wastes resulting from the associated decommissioning activities.
- Those **Enabling Facilities** that will be required to discharge the liabilities (including licensing, engineering, construction, commissioning, operational, and decommissioning costs).

#### 3.1.12 Public Consultation Process

During the period of this five year plan, a public consultation process will be carried out that will focus on the overall conceptual technical strategy to be used in addressing the nuclear legacy liabilities on the CRL site in their entirety. Following this exercise, the conceptual technical strategy will be finalized and as part of the subsequent implementation process, the Five Year Plan (CRL) may require substantial revision.

The Environmental Assessment process under CEAA will only be applied to the individual projects as they are implemented.

UNRESTRICTED 3600-01620-067-003 Page 6 Rev. 0

#### 3.1.13 Management of Uncertainties Associated with the Five Year Plan (CRL)

The plan for managing the nuclear legacy liabilities on the CRL site will require periodic refinements as a result of a number of factors including:

- Changes in the scope of the nuclear legacy liabilities,
- Changes in regulatory requirements,
- New technological discoveries,
- The results of other related initiatives being conducted by, for example, the NWMO,
- The timing associated with facilities being made available for decommissioning, i.e., shutdown and declared redundant.

As a consequence, periodic updates of the plan will be required.

#### 3.1.14 License Holder

AECL will continue to be the license holder for the nuclear legacy liabilities associated with the CRL site.

#### 3.1.15 Storage with Surveillance Periods

The optimized approach for dealing with the nuclear legacy liabilities associated with buildings, structures, facilities, waste management areas, and affected lands is to minimize the time those structures and facilities are in a storage with surveillance state, i.e., the period of time before large scale decontamination and demolition work takes place. This assumption forms a fundamental tenet of the proposed long-term strategy as well as this Five Year Plan (CRL). However, this approach only applies in those circumstances where (i) the benefits (e.g., reductions in dose, costs, wastes) of allowing further radioactive decay to occur cannot be readily demonstrated, and (ii) the required enabling facilities are in place.

#### 3.2 Chalk River Laboratories (CRL) Site

#### 3.2.1 CRL Waste Management Areas (WMAs)

- The strategy for dealing with the WMAs will utilize the following basic approaches: (i) *insitu* disposal, (ii) full recovery of wastes, and (iii) partial recovery of wastes. Recovered wastes will be subsequently processed, stored, and disposed of as appropriate.
- The strategy for the decommissioning of WMAs will generally involve a series of activities carried out in the following order: (i) addressing high priority HSSE risks, (ii) carrying out other decommissioning activities in close physical proximity to where the HSSE risks were addressed, and (iii) completing other actions that will allow a discrete area or facility to be put into a reduced state of monitoring and surveillance, or allow regulatory approval to be secured for abandonment.
- The decommissioning endstate of a WMA is assumed to be the point at which regulatory approval has been given for abandonment.

#### 3.2.2 Availability of Support Facilities and Programs

Major support facilities and services currently available at the CRL site will continue to be available throughout the period of the decommissioning program. These would typically include:

- Compliance Programs (e.g., radiation protection, environmental protection, Occupational Safety and Health (OSH), Operational Experience (OPEX), etc.).
- Utilities, waste management areas, waste treatment facilities, etc.
- Human resources, e.g., trades.
- Technical services, e.g., analytical laboratories.

Given the length of the decommissioning program, it is assumed that some of the support facilities will need to be periodically replaced and/or refurbished.

#### 3.2.3 NRU Shutdown

The NRU reactor will continue to operate beyond the period covered by this five year plan.

#### 3.2.4 CRL Operational Life

The nature of the conceptual technical strategy is relatively insensitive to the operational life of the CRL site as long as that period of time is in excess of approximately 50 years. Because AECL planning documents assume that the CRL site will continue in an operating mode for a period of at least 100 years, this value has been used for the purposes of this document.

#### 3.2.5 CRL Institutional Control Period

There will be an institutional control period of 300 years following site closure (cessation of operational activities).

#### **3.2.6** Treatment of Contaminated Groundwater

The treatment of contaminated groundwater plumes will continue for a minimum of 50 years.

#### **3.2.7** Remediation of Contaminated Sediments

Contaminated sediments in the Ottawa River associated with the CRL process sewer outfall will require remediation. The extent and nature of the remedial activities will be dictated by an assessment of the potential environmental impacts associated with various options for managing the sediments.

#### 3.2.8 CRL Special Burials of Waste

All special burials will be removed from the CRL WMAs. Special burials comprise one-of-a kind, unique, emplacements of wastes into the various waste management areas. For example, calandrias from both NRX and NRU represent special burials.

UNRESTRICTED 3600-01620-067-003 Page 8 Rev. 0

#### 3.2.9 Coordination of Operational and Decommissioning Activities

The co-existence of both operational and decommissioning programs at the CRL site is an important and unique consideration that must be taken into account in the execution of this Five Year Plan (CRL). As a consequence, special attention will need to be paid to coordinating operational activities and decommissioning activities.

In view of the anticipated complexities associated with carrying out decommissioning activities within the confines of an operating site, it has been assumed that AECL will play a formative and long-term role (e.g., act as license holder) in the management of the nuclear legacy liability program.

#### 3.2.10 CRL Decommissioning Model

The decommissioning of the CRL site will not take place as a single project, but rather as a series of individual projects. For the purposes of this Five Year Plan (CRL), it is anticipated that the site will remain fully operational with decommissioning taking place as individual, discrete activities.

#### 3.2.11 CRL Enabling Facilities

#### 3.2.11.1 General

- Enabling facilities will be under the AECL site license.
- Responsibility for the operation of some enabling facilities may lie outside of the decommissioning organization.
- All enabling facilities will be located at CRL (with the exception of the national disposal/storage facility for used nuclear fuel).
- Facilities will be integrated and shared with other site operations with cost recovery in those cases where operational programs are making use of facilities funded through the decommissioning program, or *visa versa*. The specifics of the cost recovery process will require future negotiations on a case-by-case basis.
- The decommissioning schedule may also be driven by the need to create space for enabling facilities.

#### 3.2.11.2 Facilities

The general types of enabling facilities that will be required for the management of the nuclear legacy liability at the CRL site are expected to include the following:

- Disposal Facilities
- Storage Facilities
- Analysis Facilities
- Processing Facilities
- Shielded Facilities

#### 3.3 *In-Situ* Disposal

*In-situ* disposal will form an important component of the strategy for dealing with the nuclear legacy liability, and the <u>extent</u> to which *in-situ* disposal can be utilized will have a profound impact on the strategy and particularly on the associated costs. Therefore, cases for *in-situ* disposal will be made at an early stage in the strategy to determine the requirements and success of such cases.

#### 4. IMPLEMENTATION PLAN

#### 4.1 Principle Components of the Five Year Plan (CRL)

The principle activities associated with this Five Year Plan (CRL) comprise the following:

- Further developing the overall decommissioning and waste management strategy, including (i) public consultation with affected communities, and (ii) environmental assessments;
- Submitting regulatory applications for early strategy-defined initiatives; and,
- Constructing, commissioning, and operating characterization and storage facilities;

#### While:

- Addressing immediate health, safety, security, and environmental issues;
- Decommissioning and dismantling shutdown buildings; and
- Continuing care, surveillance, monitoring, and maintenance activities.

The initiative involving further development of the strategy (see Section 4.1.1), including public consultation and environmental assessment, is an overarching task that will be highly visible and define the future phases of the strategy.

The remaining activities deal with more immediate aspects of implementing the Five Year Plan (CRL), and are discussed below in terms of the following two components, which comprise the nuclear legacy liability associated with the CRL site:

- Chalk River Laboratories (CRL) Waste Management Areas
- CRL Facilities and Structures

#### 4.1.1 Further Development of the Strategy

National and international experience points to the importance of involving stakeholders in the development of strategies for the decommissioning of nuclear facilities and sites, and for radioactive waste management. Such a consultation process needs to be seen to be open, transparent, and honest, with an emphasis on involving, listening and responding to stakeholder concerns.

During the early years of the Five Year Plan (CRL), discussions will be undertaken in accordance with a framework [2] developed by AECL for communications and public consultation to further develop and refine the long-term strategy. That strategy will identify the

overall approach for dealing with the waste and decommissioning liabilities, including objectives and plans for site restoration and waste disposal facilities.

For CRL, longer-term components of the strategy, particularly the significant waste processing and long-term waste management facilities that need to be constructed and operated to deal with the wastes, will be identified for environmental assessment (EA) under the *Canadian Environmental Assessment Act (CEAA)*. The purpose of the environmental assessments would be to satisfy the requirements under CEAA and to provide stakeholders with an opportunity to provide input in addition to that discussed above.

The following sections outline the more immediate decommissioning and waste management activities that will be carried out during the Five Year Plan (CRL).

#### 4.1.2 CRL Waste Management Areas

In terms of decommissioning the CRL Waste Management Areas, the following activities will be conducted:

#### 4.1.2.1 Legacy Waste Areas (Affected Lands) - Monitoring and Surveillance

Legacy waste burials on the CRL site that lie outside of formally licensed waste management areas (WMAs) are the responsibility of the AECL Decommissioning Program. In addition, licensed WMAs will be shut down over time and turned over to the program (e.g. Nitrate Plant, WMA "C", WMA "F", etc). These various areas will be characterized and monitored, and appropriate remedial actions will be taken as required based on the results of the characterization and monitoring initiatives. Also included in this activity are routine activities such as the installation of risk-mitigative measures (e.g., animal fencing, fire breaks, etc.)

# 4.1.2.2 WMA Evaluation and Planning

This activity includes (i) the comprehensive and ongoing groundwater monitoring program for the WMAs, including periodic updates of the nature and extent of the contaminant plumes emanating from the WMAs, and (ii) inspections, characterizations, and field verifications of historic burials in the older WMAs.

# 4.1.2.3 WMA Remediation Projects

Planned remedial activities include:

- Installation of an earthen cover over WMA "C" to limit further infiltration of rain water and snow melt into buried wastes.
- Recovery of solvent bunkers in WMA "B" with subsequent processing, packaging, and storage or disposal in modern facilities.
- Recovery of a number of specific waste burials in WMA "A", with subsequent processing, packaging, and storage or disposal in modern facilities.

#### 4.1.2.3.1 South Swamp Plume Treatment Facility

This facility will intercept and remove radioactive contamination from groundwater that originates from WMA "A" and discharges to the "South Swamp" wetland. This task is expected to include the construction of an engineered, "passive" interception system.

#### 4.1.2.4 Groundwater Plume Treatment – Operation

This activity includes the operation and maintenance of the following groundwater treatment facilities:

- WMA "B" Spring B pump and treat system
- Chemical Pit Chemical Pit pump and treat system
- Nitrate Plant Plume wall and curtain passive treatment system
- WMA "A" South Swamp permeable reactive barrier (PRB) treatment system

#### 4.1.2.5 Tile Hole Remediation

Tile hole investigation and stabilization activities will include the removal of water from tile hole structures and venting closed fuel containers.

Other activities include investigations and studies to prepare for fuel recovery and the subsequent removal of any sludge found in the tile holes.

#### 4.1.2.6 Fuel Packaging and Storage

The early generation tile holes, which contain the oldest experimental fuels, require recovery of the fuel contents, drying of the fuel, and emplacement into new storage facilities. This activity includes the construction and "cold" commissioning (i.e.; not including radioactive materials) of a new storage block and the associated drying and repackaging facility by the end of year 5 for the fuels in the 110 tile holes with the most problematic and degraded fuel and storage conditions.

#### 4.1.2.7 Solid Waste Storage Facilities

This initiative includes the activities required to ensure that shielded, above-ground storage facilities are available for the wastes generated from building decommissioning activities and the recovery of waste from the WMAs. As an example, the construction of the Shielded Modular Above Ground Storage (SMAGS) facility will provide a modern storage facility for wastes until they can be further processed and placed into disposal facilites. By the end of year 5, one SMAGS will have been built and put in operation, and a second SMAGS project will have been initiated.

#### 4.1.2.8 Waste Analysis Facility

Our knowledge about the wastes generated in the past at the AECL sites is somewhat limited due to the nature of the information that was being gathered, which principally focussed on the radiation fields associated with the waste. Therefore, characterization efforts must now focus on two areas, i.e., (i) characterizing existing wastes to the extent necessary to support disposal cases,

and (ii) ensuring that new wastes are properly characterized. Waste characterization capabilities need to be established that will enable the following:

- Analysis of material in the field to determine the general classification of the waste (likely clean, contaminated, hazardous, etc.)
- Verification that material identified as "likely clean" meets regulatory free release criteria
- Analysis of material identified as radioactively contaminated to determine the amount of long-lived radionuclides
- Analysis of material to determine the nature and extent of hazardous material
- Maintenance of records in support of the characterization process

Waste characterization includes all those actions to characterize, qualify, and record waste volumes and properties. The objective is to achieve segregation of the waste at the generation stage to avoid mixing wastes having different properties that would in turn require different waste management strategies. The characterization could be detailed for discrete wastes or be preliminary at the building or room level. As a result of the actions undertaken, the physical, chemical and radiological characteristics of the waste are determined, and these characteristics are used to determine the disposition path for the waste (qualify the waste) and a record of the characteristics and disposition is maintained. By the end of year 5, the first components of a Waste Analysis Facility will be built and in operation.

# 4.1.2.9 Solid Waste Processing Facilities

The two solid waste processing facilities included in the Five Year Plan (CRL) comprise (i) an incinerator for radioactively contaminated waste, and (ii) the Processing and Conditioning Facility for Cemented Molybdenum-99 (Moly-99) Wastes arising from isotope production. The design, safety analysis and environmental assessment for the incinerator will be completed by the end of year 5, as well as the assessment of the cemented Moly-99 waste form and the initial development of the process to recover the mercury and radioactive contaminants.

# 4.1.2.10 Long-Term Waste Management Facilities

The time frames for implementing disposal facilities can extend over decades, and the activities to be carried out over the next 5 years represent some of the early work that is required to support the safety assessments, siting process, design, and construction of these facilities. A geological assessment of the CRL site for the possible siting of a shallow rock cavern disposal facility (Chalk River Geological Disposal Facility) will be completed by the end of year 5. Further, a review of the need and benefits of constructing, in addition to the shallow rock cavern, two IRUS (Intrusion Resistant Underground Structure) disposal facilities for short-lived radioactive waste will be completed. Also, a site assessment for a new on-site landfill will be completed, as well as remedial activities in preparation for closure of the existing landfill.

# 4.1.2.11 Hot Cells Upgrades

Process development for the Processing and Conditioning Facility for Cemented Moly-99 Wastes will require access to a "warm cell", and a "hot cell" will also be needed to examine and analyze waste reactor fuel to assess conditioning and long-term management requirements. Hot cells are facilities that shield operators from direct radiation through the use of remote handling equipment and filtered ventilation and safety systems. Warm cells are used for lower-hazard, less radioactive wastes and are designed to permit more rigorous testing than would normally be carried out in a hot cell. CRL has an existing hot cell facility that will be upgraded to allow for continued operation, and as part of the upgrade process, a warm cell will be added.

#### 4.1.3 CRL Facilities and Structures

For the decommissioning of CRL facilities and structures, the following types of activities will be conducted:

#### 4.1.3.1 Safe Shutdown

As buildings are taken out of service (declared redundant by operational programs), the removal of stored wastes, hazardous chemicals and other hazard sources can begin, and to a limited extent contamination removal can also be initiated. AECL anticipates that approximately 20 existing buildings will be shutdown over the next 5 years, and this activity covers hazard-removal and other preparatory tasks that can be performed before the buildings come under the full responsibility of the Decommissioning Program. The activities associated with safe shutdown are denoted as "Perform Bldg # Shutdown Operations" in the Gantt Chart presented in Section 4.2.

# 4.1.3.2 Building Hazards Assessments

As buildings are declared redundant and become the responsibility of the Decommissioning Program, assessments must be conducted of (i) the physical/structural condition of the buildings, (ii) the condition of the services within the building (heating, fire protection, water, electrical), and (iii) the hazards (radiological, chemical). This information is used to determine the decommissioning and remedial work that is required to manage the buildings in a cost/riskoptimal manner, and provides important input into the process used to systematically prioritize decommissioning activities. Over the next 5 years, hazards assessments will be required for approximately 30 to 40 buildings. The activities that generally include building hazards assessments are denoted as "Prepare/Submit/Complete Bldg# Decom Documentation" in the Gantt Chart presented in Section 4.2.

#### 4.1.3.3 Building Decommissioning

As discussed under "Building Hazards Assessments", a number of additional buildings will become the responsibility of the Decommissioning Program over the 5-year period of this plan. The actual process of building decommissioning includes several discrete steps comprising the preparation of these buildings for safe storage with surveillance, preparation for demolition, and actual demolition. Over the time period associated with this plan, various buildings will be subject to one or more of these actions, for example, demolition work will be carried out on approximately 5 buildings.

UNRESTRICTED 3600-01620-067-003 Page 14 Rev. 0

#### 4.1.3.4 Monitoring and Surveillance

This task includes the work to monitor, maintain and repair buildings under the responsibility of the Decommissioning Program to ensure that they remain in a safe and compliant state until they are finally demolished. Monitoring and surveillance will be required for approximately 25 buildings over all or part of the 5-year period. The activities associated with monitoring and surveillance are denoted as "Perform Bldg# SWS" in the Gantt Chart presented in Section 4.2.

#### 4.1.3.5 Building 204 Bays

This activity involves completion of Phase 1 decommissioning for Building 204, which will establish a safe storage with surveillance state for the facility. In particular, the water will be removed from a network of fuel handling bays, and be subsequently treated in the CRL Waste Treatment Centre. Following the removal of the water, the bay structure will be stabilized to an extent that will allow the bays to be left in this state for a long period of time.

#### 4.1.3.6 Heavy Water Upgrader

In the next 5 years, the regulatory approval process for decommissioning the Heavy Water Upgrader Plant (HWUP) will be completed, the contaminated systems will be removed, including 5 underground storage tanks associated with the facility, and the building will be returned to site operations for further use.

#### 4.1.3.7 NRX Phase 1

This decommissioning activity involves the continued effort to prepare the NRX reactor for long-term storage with surveillance. The storage with surveillance period is necessary to allow radioactive decay to occur, so that radiation exposures will be lower when the facility is finally dismantled and decommissioned. Activities in the 5-year time frame associated with this plan include roof replacement and other structural upgrades, asbestos removal, and the deactivation of systems that are no longer required.

#### 4.1.3.8 Tank Preparation for Decommissioning

The work associated with this activity relates to a series of liquid waste storage tanks (21 in total) at the CRL site, which date back to the 1940s, 1950s and 1960s. These tanks contain a variety of radioactive and chemical liquid wastes that need to be recovered and transferred to a new liquid storage system. This project has been specifically established to prepare for the actual liquid recovery and transfer, including addressing tank specific details on access for liquid recovery, tank rinsing and sludge recovery.

#### 4.1.3.9 Stored Liquid Waste Transfer and Operations

In year 4 of this plan, recovery of liquid waste from the tanks discussed above is scheduled to begin. This activity involves the physical transfer operations that will recover the liquid and sludge and provide the necessary tank rinsing.

### UNRESTRICTED 3600-01620-067-003 Page 15 Rev. 0

#### 4.1.3.10 Liquid Waste Storage Facility

This task involves the design, licensing, construction and "cold" commissioning of the new tank facility into which the contents of the 21 existing tanks will be consolidated into three modern tanks. This new storage facility will provide for interim storage pending processing of the liquid wastes into a stable waste form.

#### 4.2 Gantt Chart

Appendix A provides a summary of the activities in the Five Year Plan (CRL) starting April 2006 as presented in the form of a Gantt Chart. This schedule is predicated on the planning assumptions presented in Section 3 of this document.

The activities in the Gantt chart are divided into the following categories:

- CRL
  - o Licensed Listed Facilities
  - Radiochemical Laboratories
  - Low Hazard Structures
  - o Non-Contaminated Structures
  - Stacks and Tanks
  - o Affected Lands
  - Waste Management Areas
- CRL Enabling Facilities
- General Program Costs

#### 5. **REFERENCES**

- [1] "Comprehensive Preliminary Decommissioning Plan for AECL's Chalk River Laboratories", CPDP-01600-PDP-002, Revision R1, 2006 February
- [2] "Framework for a Communications and Public Consultation Plan, Periodic Updating of the Public on the Comprehensive Preliminary Decommissioning Plan for Chalk River Laboratories", 3600-07440-PLA-001, Revision R0, 2005 December.

UNRESTRICTED 3600-01620-067-003 Page 17 Rev. 0

#### **APPENDIX A: Gantt Chart -**Five Year Operational Implementation Plan for the Chalk River Laboratories

Activity	Activity	Orig	Early	Early								
ID	Description	Dur	Start	Finish	20	006	2007	· · · · · · · · · · · · · · · · · · ·	20	08 2009	2010	2011
1.1.01.100												
NRX Reactor		7 770*	0040000	10 14 100								
1111000010	Decommission B100 Facility	,	02APR03	13JAN33	-							
1111000060	Assume B100 fixed facility costs	,	03APR03	01APR30	-			- <b>D</b> 400 (				
1111000072	Do Prepare B100 for SWS - CNSC concerns		04APR05	09FEB07	-		Do Prepar	e B100 fo	or SWS - CN	SC concerns		
1111000080	Perform B100 SWS	,	12FEB07	09JAN30	-							
1111000085	Prepare/Submit B100 Decom final Docs (DDP/EA)		02APR07	31MAR09					Propare	DWPs for B100	t B100 Decom fina	II DOCS (DDP/EA)
1111000086	Prepare DWPs for B100	/83	01APR09	30MAR12					Пераге			
111100X010	Building /Trench Decommission B100X Facility	2 015*	02APR03	21DEC10								Decommis
111100X060	Assume B100X fixed facility costs		03APR03	21DEC10 24SEP10							7	Assume B100X
111100X080	Perform B100X SWS		15MAY03	30MAR10							Perform F	B100X SWS
111100X085	Prepare/Submit B100X Decom final Docs (DWP)		29MAR06				Prenar	/Submit		om final Docs (DWP)		
111100X085	Obtain CNSC approval of DWPs		30MAR10		-			e/Gubiiiit	D TOOK Dect	Obtain CNSC approval of E	WPs	
111100X090	Prepare B100X for Demolition		31MAR10							Prepare B100X for Demo		
111100X090	Perform B100X demolition		29SEP10	203EP10 21DEC10	-					•	3100X demolition	
111100X105	Provide Interim waste Storage for 100X waste		293EF10 29SEP10	040CT21	-					Provide Interim waste Storag		
111100X103	B100X Remediation Complete - Site Available	2,074		21DEC10	-					B100X Remediation Co		
1.1.01.101	Brook Remediation Complete - Site Available	0		ZIDECIU								
1.1.01.101												
NRX Fan Hou	se											
1111010010	Decommission B101 Facility	2,610*	02APR03	02APR13								
1111010080	Perform B101 SWS	2,346	04APR03	30MAR12								
1111010060	Assume B101 fixed facility costs	2,345	07APR03	30MAR12								
1111010085	Prepare/Submit B101 Decom final Docs (DWP)	262	28MAR06	28MAR07			Prepare	e/Submit	B101 Decor	n final Docs (DWP)		
NRX Filter Ho	use											
111101X010	Decommission B101X Facility	2,363*	02APR03	20APR12								
111101X060	Assume B101X fixed facility costs	2,345	03APR03	28MAR12								
111101X080	Perform B101X SWS	2,047	15MAY03	18MAR11								Perf
111101X085	Prepare final B101X Decom Doc - DWP	262	28MAR06	28MAR07				e final B1	01X Decom	Doc - DWP		
111101X090	Prepare B101X for Demolition	261	19MAR10	18MAR11						Prepare B101X for Demol	lition	
1.1.01.103												
NRX Delay Ta				_								
1111030010	Decommission B103 Facility		02APR03	21SEP12								
1111030060	Assume B103 fixed facility costs		03APR03	10AUG11								
1111030080	Perform B103 SWS	,	15MAY03		_							Perform B103 S
1111030085	Prepare final B103 Decom Doc -Outbuildings DWP	150	03SEP07	28MAR08					Prep	are final B103 Decom Doc -Outbu	ildings DWP	
Start Date		Early Bar	MAST					eet 1 of 27	Det	<b>D</b>		
Finish Date Data Date	UZAPRU3 1	Progress Bar		Document 3	3600-016	520-(	067-003 Rev. R0		Date	Revision	Checke	d Approved
Run Date	09MAR06 11:56	Critical Activity	·	CRL 5 Y	/ear Imp	olem	entation Plan					
				Cha	eeic Sch	انتامم	e Layout					
				Cla	3310 3011	cuul	c Layour					
© Primave	era Systems, Inc.											

Activity	Activity	Orig	Early	Early							
ID	Description	Dur	Start	Finish	2006	2007	2008	2009	2	010	2011
1111030090	Prepare B103 for Demolition	262	21SEP10	21SEP11				Prepare B103	3 for Demo	lition 📐	
1.1.01.104											
NRX Delay Ta	nk #2	T	1								
1111040010	Decommission B104 Facility	2,625*	02APR03	23APR13							
1111040060	Assume B104 fixed facility costs	2,342	03APR03	23MAR12							
1111040080	Perform B104 SWS		15MAY03								Per
1111040085	Prepare B104 final Decom Documentation -DWP	150	03SEP07	28MAR08			Prepare B104 final De	com Documentat	ion -DWP		
1.1.01.126											
Monitor & Wat		L									
1111260010	Decommission B126 Facility		02APR03	26DEC07			Decommission B126 Facilit	y .			
1111260060	Assume B126 fixed facility costs		03APR03	09OCT06	Assur	ne B126 fixed facility					
1111260080	Perform B126 SWS		26JUN03	03OCT07			orm B126 SWS				
1111260090	Prepare B126 for Demolition		02AUG07	03OCT07		Pre	pare B126 for Demolition				
1111260100	Perform B126 demolition		04OCT07	26DEC07			Perform B126 demolition				
1111260110	B126 Remediation Complete - Site Available	0		26DEC07			B126 Remediation Complet	e - Site Available			
1.1.01.133											
Rod Bay Wash		1 0 101		00141505							
1111330010	Decommission B133 Facility		02APR03	30MAR07		Decommission					
1111330060	Assume B133 fixed facility costs		03APR03	28SEP06		e B133 fixed facility	COSIS				
1111330080	Perform B133 SWS		04APR03	29SEP06		n B133 SWS					
1111330090	Prepare B133 for Demolition		03APR06	29SEP06	Prepar	e B133 for Demolitio					
1111330100	Perform B133 demolition		02OCT06	30MAR07		Perform B133 d					
1111330110	B133 Remediation Complete - Site Available	0		30MAR07		B133 Remediati	on Complete - Site Available				
1.1.01.144											
One Halder D	all discus										
Gas Holder Bu	Decommission B144 Facility	1 042*	02APR03	30MAR07		Decommission	B144 Escility				
	,	,			Accum	e B144 fixed facility					
1111440060	Assume B144 fixed facility costs		03APR03 04APR03	28SEP06 29SEP06		n B144 fixed facility	0313				
	Perform B144 SWS		04APR03			e B144 for Demolitio					
1111440090	Prepare B144 for Demolition		020CT06	295EP06 30MAR07	Prepar	Perform B144 d					
	Perform B144 demolition						on Complete - Site Available				
1111440110	B144 Remediation Complete - Site Available	0		30MAR07		B 144 Keilleulau	on complete - Site Available				
1.1.01.145											
Research Ruil	ding - Pool Test Reactor										
	Decommission PTR Facility	7 292*	02APR03	13MAR31							
	· · · · · · · · · · · · · · · · · · ·	1,202									
Start Date Finish Date	20DEC69	Early Bar	MAST	Document		Sheet 2 of 27	Date	Revision		Checked	Approved
Data Date	02APR03	Progress Bar		Document	3600-01620-067-00			NG (13)UH		CHECKEU	Approved
Run Date	09MAR06 11:56	Critical Activity	<pre>/</pre>	CRL 5 Y	ear Implementatio	n Plan					
				Cla	ssic Schedule Layo	ut					
					cere concours Layo						
© Primave	era Systems, Inc.		1								

lity costs
0 for SWS
r reuse
Approved
<u> </u>

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	0000		0000						0011
1.1.01.215	Description	Dui	Otart	Thish	2006	2007	2008	2009			<u>20</u> 2		2011
1.1.01.210													
Tritium Extract	tion - CECEUD												
1112150010	Decommission B215 Facility	3,069*	02APR03	05JAN15									
1112150030	Perform B215 Shutdown Operations	1,043	02APR03	30MAR07			hutdown Operations						
1112150040	Prepare B215 Decom Documentation	520	02APR07	27MAR09				Prepare	B215 De	ecom I	Docum	entation	
1112150050	Turnover B215 to Decommissioning	0	02APR07			Turnover B215	to Decommissioning						
1112150060	Assume B215 fixed facility costs	1,564	02APR07	28MAR13									
1112150080	Perform B215 SWS	1,564	02APR07	28MAR13	Perform B215 SWS								
1.1.01.220													
Ops Lab - Pu l	Recovery												
1112200010	Decommission B220 Facility	5,615*	02APR03	08OCT24									
1112200060	Assume B220 fixed facility costs	2,353	03APR03	09APR12									
1112200080	Perform B220 SWS	4,964	03APR03	12APR22									
1112200040	Prepare B220 Decom Documentation	895	02APR04	06SEP07			re B220 Decom Docum	entation					
1112200070	Prepare B220 for SWS	261	01APR10	31MAR11				Prepare B	220 for \$	sws			
1.1.01.223													
Pu Tower	1	-	1										
1112230010	Decommission B223 Facility	6,401*	02APR03	130CT27									
1112230060	Assume B223 fixed facility costs	5,748	03APR03	14APR25									
1112230080	Perform B223 SWS	4,951	03APR06	24MAR25									
1.1.01.225													
	Columns - Mo99 Production	1.0.40*		0000700	Decor	nmission B225 Fa							
1112250010	Decommission B225 Facility		01APR08	06OCT23	Decor	11111551011 B225 Fa							
1112250020	Cease B225 Facility operations		01APR08*		Borform B225	Shutdown Opera	Cease B225 Fac	lity operations					
1112250030	Perform B225 Shutdown Operations	,	01APR08	05APR12		Decom Document							
1112250040	Prepare B225 Decom Documentation	1,048	01APR08	05APR12	Prepare 6225 I	Decom Document							
1.1.01.228													
Maste Solutio	n Evenerator												
Waste Solution	Decommission B228 Facility	2 625*	02APR03	234PR13									
1112280010	Assume B228 fixed facility costs		03APR03	060CT10									sume B22
1112280080	Perform B228 SWS		03APR03	01NOV10									erform B2
1112280080	Prepare B228 for SWS		100CT07	12OCT09					Pro	hare B	228 fo	r SWS	
1112280070	Prepare B228 for Demolition		20APR10	20APR11				Prepare B228 f					
1112280090	Prepare B228 for Demolition PM & Support for B228 Demolition		20APR10 20APR10	20APR11 23APR13				Support for B2					
		/ 86	20/45/10	ZJAFRIJ									
Start Date		Early Bar	MAST		000 04000 007 000 -	Sheet 4 of 27	Dete	Devision					Annessed
Finish Date Data Date	UZAPRU3	Progress Bar		Document 3	600-01620-067-003 F	ev. KU	Date	Revision				necked	Approved
Run Date	09MAR06 11:56	Critical Activity	/	CRL 5 Y	ear Implementation F	lan			-				
				Class	sic Schedule Layout								
_				Cias	SIC SCHEUUR LAYOUL								
© Primave	era Systems, Inc.												

Activity	Activity	Orig	Early	Early					
ID	Description	Dur	Start	Finish	2006	2007	2	2009 2010	
1.01.229				1					
Fissile Solutio	n Storage Tank								
1112290020	Cease B229 Facility operations	0	01APR08*				Cea	se B229 Facility operations	
1112290030	Perform B229 Shutdown Operations	1,048	01APR08	05APR12	Perform B229 Sh	-	_		
1112290040	Prepare B229 Decom Documentation	1,048	01APR08	05APR12	Prepare B229 Dec	com Documenta	tion		
.1.01.250									
	jineering - Tritium Lab			1					
111250A040	-		31MAR09		Prepar	re B250-Tritium		n Documentation	
111250A010	Decommission B250-Tritium Lab Facility	,	01APR10	02JAN18				Decommission B250-Tritium Lab Facility	
111250A020	Cease B250-Tritium Lab Facility operations		01APR10					se B250-Tritium Lab Facility operations	
111250A030	Perform B250-Tritium Lab Shutdown Operations	450	01APR10	21DEC11			Perform	B250-Tritium Lab Shutdown Operations	
.1.01.429									
RR Fuel Fabri				4045514					
1114290010	Decommission B429 Facility		01APR09	13APR18			ecommiss	ion B429 Facility	
1114290020	Cease B429 Facility operations		01APR09*					Cease B429 Facility operation	S
1114290030	Perform B429 Shutdown Operations		01APR09	01APR10		Perform	3429 Shut	down Operations	
1114290040	Prepare B429 Decom Documentation	786	01APR09	04APR12		Prepare B	429 Decor	n Documentation	
.1.01.9X1									
B996		(0.000		00100					
1119960000	PE1 Facilities Safe Shutdown Allowance - OAG	13,000	02APR07*	26JAN57					
.1.02.107									
Physics & Cou	neral Chemistry Lab								
1121070000	Decommission B107 Facility	1 204*	02APR03	17MAR08			Dec	mmission B107 Facility	
1121070080	Prepare B107 for Demolition	,	04APR05	110CT06	Prepare B1	07 for Demolitio			
1121070000	Perform B107 demolition		03APR07	17MAR08				orm B107 demolition	
1121070090	Provide B107 Interim Waste Storage		03APR07	040CT21					
1121070095	B107 Remediation Complete - Site Available	3,785		17MAR08			<b>●</b> R10	Remediation Complete - Site Available	
.1.02.207		0					- DIU		
.1.02.207									
Liquid Waste	Storage								
1122070000	Decommission B207 Facility	1 572*	31MAR10	07APR16				Decommission B207 Facility	
11220700000	Cease B207 Facility operations		31MAR10					Cease B207 Facility operations	
1122070010	Perform B207 Shutdown Operations		31MAR10	31MAR11				Perform B207 Shutdown Operations	
1122070020	Prepare B207 Decom Documentation		31MAR10					Prepare B207 Decom Documentation	
1122070030		202	0110741110						
art Date	01APR03	Early Bar	MAST	_		Sheet 5 of 27	_		1
nish Date ata Date	20DEC69	Progress Bar		Document 3	600-01620-067-003 Rev	/. R0	Date	Revision Chec	cked Appi
un Date	09MAR06 11:56	Critical Activity	, ,	CRL 5 Y	ar Implementation Pla	n -			
					•	-			
				Cla	sic Schedule Layout	F			
© Primave	era Systems, Inc.					F			

Activity	Activity	Orig Early	Early						
ID	Description	Dur Start	Finish	2006 200	07	2008	2009	2010	2011
1.1.02.224									
Cool Waste St	torage Area								
1122240000	Decommission B224 Facility	1,834* 01APR10	11APR17				Decommission B224 Fa		
1122240010	Cease B224 Facility operations	0 01APR10	r				Cease B224 Facility opera	tions	
1122240020	Perform B224 Shutdown Operations	262 01APR10	01APR11				rm B224 Shutdown Opera		
1122240030	Prepare B224 Decom Documentation	262 01APR10	01APR11			Prepar	e B224 Decom Document	ation	
1.1.02.240									
Surge Tank &									
1122400000	Decommission B240 Facility	2,863* 01APR05	22MAR16						
1122400040	Turnover B240 to Decommissioning	0 31MAR09						to Decommissioning	
1122400050	Assume B240 fixed facility costs	1,301 31MAR09	25MAR14		Assu	me B240 fixed facilit	ty costs		
1122400060	Prepare B240 for SWS	262 31MAR09	31MAR10					Prepare B240	for SWS
1122400070	Perform B240 SWS	1,035 01APR10	19MAR14				Perform B240	sws	
1.1.02.242									
Waste Delay T									
1122420000	Decommission B242 Facility	1,044* 01APR09				ecommission B242			
1122420010	Cease B242 Facility operations	0 01APR09	r				Cease B242 Fac	cility operations	
1122420020	Perform B242 Shutdown Operations	262 01APR09	01APR10			B242 Shutdown Ope			
1122420030	Prepare B242 Decom Documentation	262 01APR09	01APR10		Prepare B	242 Decom Docume			
1122420040	Turnover B242 to Decommissioning	0 02APR10				Turno	over B242 to Decommissio		
1122420060	Prepare B242 for SWS	262 02APR10	04APR11				Prepare B242 for	sws	
1122420080	Prepare B242 for Demolition	262 30MAR11	29MAR12				F	Prepare B242 for Dem	olition
1.1.02.243									
Delay Tanks fo		<b>·</b> · · ·							
	Decommission B243 Facility	1,572* 01APR09				ecommission B243			
1122430010	Cease B243 Facility operations	0 01APR09					Cease B243 Fac	cility operations	
1122430020	Perform B243 Shutdown Operations	262 01APR09	01APR10			B243 Shutdown Ope			
1122430030	Prepare B243 Decom Documentation	262 01APR09	01APR10		Prepare B	243 Decom Docume			
1122430040	Turnover B243 to Decommissioning	0 02APR10					over B243 to Decommissio	-	
	Assume B243 fixed facility costs	786 02APR10	-			As	sume B243 fixed facility o		
	Prepare B243 for SWS	262 02APR10	04APR11				Prepare B243 for	SWS	
1.1.02.250									
	ineering - General Bldg				noro DOFO F				
112250B030	Prepare B250 Bldg Decom Documentation	262 31MAR09	31MAR10	Prej	pare B250 E	Bidg Decom Docume			
Start Date	01APR03	Early Bar MAST			Sheet 6 of 27				
Finish Date Data Date	20DEC69	Progress Bar	Document 3	600-01620-067-003 Rev. R0	)	Date	Revision	Checked	Approved
Run Date		Critical Activity	CRL 5 Y	ear Implementation Plan	-				
					-				
			Cla	ssic Schedule Layout	-				
© Primave	era Systems, Inc.				-				

Activity	Activity	Orig	Early	Early																				
ID	Description	Dur	Start	Finish		2006	3		20	07			20	08			2	009			20	10	2	2011
112250B000	Decommission B250 Building General	2,358*	01APR10	15APR19		2000				01					ommi	ssion		Buildi	ng Ge	neral				
112250B010	Cease B250 Bldg Facility operations	0	01APR10*		1									Ce	ase B	250 E	Bidg Fa	acility	opera	tions				
112250B020	Perform B250 Bldg Shutdown Operations	262	01APR10	01APR11	1								Pe	rform	B250	Bldg	Shut	down (	Opera	tions				<b>–</b>
1.1.02.468																								
R&IS Vehicle	Decontam			-																				
1124680000	Decommission B468 Facility	1,048*	01APR09	05APR13								Decom	missi	on B4	68 Fa	acility								
1124680010	Cease B468 Facility operations	0	01APR09*														Cea	se B4	68 Fac	ility o	perati	ons		
1124680020	Perform B468 Shutdown Operations	262	01APR09	01APR10								B468					—				<b>7</b>			
1124680030	Prepare B468 Decom Documentation	262	01APR09	01APR10						Pre	pare E	3468 D	ecom				<b>_</b>				<b>7</b>			
1124680040	Turnover B468 to Decommissioning	0	02APR10											Tu	rnove	er B46	68 to D	ecomi	nissic	ning				
1124680050	Assume B468 fixed facility costs	524	02APR10	04APR12											Assı	ime E	8468 fi	xed fa	cility o	osts				
1124680060	Prepare B468 for SWS	262	02APR10	04APR11													Prepa	re B46	68 for	sws	<u> </u>			<b>-</b>
1.1.02.9X2																								
B997		1			4																			
1129970000	PE2 Facilities Shutdown Cost Allowance - OAG	13,000	02APR07*	26JAN57				4								-	_							
1.1.03.102					4																			
					4																			
Drum Cleaning		1 0 1 0 1			<mark> </mark> _			D 10	2 Faci	1:4. /														
1131020000	Decommission B102 Facility		03SEP07	07SEP11		ecom	missio		z raci	· · ·		<b>D</b> 400	<b>F</b> 11											
1131020010	Cease B102 Facility operations		03SEP07*		-						Cease	B102	Facili	-										
1131020020	Perform B102 Shutdown Operations		03SEP07	02SEP08	-													utdow						
1131020030	Prepare B102 Decom Documentation		03SEP07	02SEP08	-													com D						
1131020040	Turnover B102 to Decommissioning		03SEP08	0005540					Assum	o P10	2 fixe	d faail	ity oo		lurnc	over B	5102 to	Deco	mmis	sionin	g			_
1131020050	Assume B102 fixed facility costs		03SEP08	06SEP10	-				155uiii	ebiu	ZIIXe	u iacii							L					
1131020060	Prepare B102 for SWS		03SEP08	03SEP09	_										Dorf	orm E	2102 6	ws		re B10	2 for	5005		
1131020070	Perform B102 SWS		04SEP09	06SEP10	_								Dr				emoli							
1131020080	Prepare B102 for Demolition		04SEP09	06SEP10	-								FI	epare	D102		emon		orm D	102 d	emolit	ion		
1131020090	Perform B102 demolition		07SEP10	07SEP11												Dra	urido E	3102 Ir						
1131020095	Provide B102 Interim waste Storage	2,890*	07SEP10	04OCT21	<u> </u>											Pro		5102 11	lterim	wasie	31012	ige		
Drum Cleanin		4.04.0*	0040007	00400040	4																			
113102X000	···· ··· · ·· · · · · · · · · · · · ·			06APR12	-				Ceas	0 P4	2Y E	cility	onoro	tione										
113102X010	Cease B102X Facility operations		02APR07*		-				Ceas		727 6	cinty	_ ·		1022	Shut	down	Opera	tions					
113102X020	Perform B102X Shutdown Operations Prepare B102X Decom Documentation		02APR07	01APR08	-			4										umen						
113102X030	-		02APR07 02APR08	01APR08	-			4										missio						
113102X040	Turnover B102X to Decommissioning				+		Assur	ne R1	02X fix	ed fa	cility c			over	01027		ecom		mig					
113102X050	Assume B102X fixed facility costs		02APR08	06APR11	-		,			Suid	unity C								1022		ve			-
113102X060	Prepare B102X for SWS	262	02APR08	02APR09	<u> </u>								7				Pre	pare B	1028	for SV	v5			<u> </u>
Start Date Finish Date	20DEC691	Early Bar	MAST	Document 3	3600	.01620	1-067	.003 E		Sheet 7	7 of 27	Dat	e				Revisi	on			C	hecked	Appr	oved
Data Date	02APR03	Progress Bar		Document.	-000-	01020	5-007-	-505 F	GV. RU			Da									Ť			
Run Date	09MAR06 11:56	Critical Activity		CRL 5 \	/ear	Imple	menta	ation F	lan															
				Cla	ssic {	Sched	ule La	avout																
	are Systems Inc.			014				,																
© Primave	era Systems, Inc.																							

IDDescriptionDurStartFinsh2006200720082009113102X070Perform B102X SWS52403APR0906APR11113102X080Prepare B102X for Demolition26206APR1006APR11113102X080Prepare B102X for Demolition26206APR1006APR11113200000DecommissionIng113200000Decommission B200 Facility4.834*02APR07113200000Decommission B200 Facility operations002APR07*01APR08113200000Perform B200 Shutdown Operations26202APR0701APR08113200000Perform B200 Com Documentation26202APR0701APR08113200000Prepare B200 Decom Documentation26202APR0701APR081132000001Cease B200 Facility costs78602APR0806APR111132000020Perform B200 Shutdown Operations26202APR0806APR111132000030Prepare B200 for SWS26202APR0906APR111132000040Turnover B200 to Decommissioning002APR0906APR11113200050Assume B200 fixed facility costs52403APR0906APR111132000070Perform B200 SWS52403APR0906APR11113200080Prepare B200 for Demolition & Bldg Shell - fire52410CT1023OCT12113200080Prepare B200 for Demolition & Bldg Shell - fire52410CT1023OCT12113200080Prepare B200 for Demolition & Bldg Shell - fire52410CT1023OC	S	2011
113102X070       Perform B102X SWS       524       03APR09       06APR11         113102X080       Prepare B102X for Demolition       262       06APR10       06APR11       Prepare B102X SWS       Prepare B102X for Demolition         1.032000       Decommission B200 Facility       4.834*       02APR07       090CT25       090CT25         113200000       Decommission B200 Facility operations       0       02APR07       090CT25         113200000       Decommission B200 Facility operations       02APR07       090CT25         113200000       Perform B200 Shutdown Operations       262       02APR07       01APR08         113200000       Perform B200 Shutdown Operations       262       02APR07       01APR08         113200000       Perform B200 Shutdown Operations       262       02APR07       01APR08         113200000       Prepare B200 Decom Documentation       262       02APR08       06APR11         113200000       Prepare B200 fixed facility costs       786       02APR08       06APR11         113200000       Prepare B200 for SWS       260       02APR09       06APR11         113200000       Prepare B200 for Demolition & Bidg Shell - fire       524       03APR09       06APR11         1132000000       Prepare B200 for Demolition & Bid	S	
1.1.03:200         Reactor & Processing Facilities Commissioning         113200000       Decommission B200 Facility       4,834*       02APR07       09OCT25         113200010       Cease B200 Facility operations       0       02APR07*         1132000020       Perform B200 Shutdown Operations       262       02APR07       01APR08         1132000030       Prepare B200 Decom Documentation       262       02APR07       01APR08         1132000040       Turnover B200 to Decommissioning       0       02APR08       Prepare B200 Decom Documentation         1132000050       Assume B200 fixed facility costs       786       02APR08       02APR09         1132000060       Prepare B200 for SWS       262       02APR09       06APR11         1132000080       Prepare B200 for SWS       524       03APR09       06APR11         1132000080       Prepare B200 for Demolition & Bidg Shell - fire       524       210CT10       230CT12         1132000080       Prepare B200 for Demolition & Bidg Shell - fire       524       210CT10       230CT12         113200080       Prepare B200 for Demolition & Bidg Shell - fire       524       210CT10       230CT12         113200080       Prepare B200 for Demolition & Bidg       See	S	
Reactor & Processing Facilities Commissioning         1132000000       Decommission B200 Facility operations       0 02APR07       09OCT25         1132000010       Cease B200 Facility operations       0 02APR07       01APR08         1132000020       Perform B200 Shutdown Operations       262       02APR07       01APR08         1132000040       Turnover B200 Decom Documentation       262       02APR07       01APR08         1132000050       Assume B200 fixed facility costs       786       02APR08       06APR11         1132000060       Prepare B200 for SWS       262       02APR09       06APR11         1132000070       Perform B200 SWS       524       03APR09       06APR11         1132000800       Prepare B200 for Demolition & Bldg Shell - fire       524       210CT10       230CT12         Filtered Water Storage		
Reactor & Processing Facilities Commissioning         1132000000       Decommission B200 Facility operations       02APR07       09OCT25         1132000010       Cease B200 Facility operations       0       02APR07       01APR08         1132000020       Perform B200 Shutdown Operations       262       02APR07       01APR08         1132000040       Turnover B200 Decom Documentation       262       02APR07       01APR08         1132000050       Assume B200 fixed facility costs       786       02APR08       06APR11         1132000060       Prepare B200 for SWS       262       02APR08       06APR11         1132000070       Perform B200 Struct facility costs       786       02APR08       06APR11         1132000070       Perform B200 SWS       262       02APR09       06APR11         1132000080       Prepare B200 for SWS       262       02APR09       06APR11         1132000070       Perform B200 SWS       524       03APR09       06APR11         1132000080       Prepare B200 for Demolition & Bldg Shell - fire       524       21OCT10       23OCT12         Filtered Water Storage       Vertice Storage		
113200000       Decommission B200 Facility       4,834*       02APR07       09OCT25         113200010       Cease B200 Facility operations       0       02APR07*         113200020       Perform B200 Shutdown Operations       262       02APR07       01APR08         1132000030       Prepare B200 Decom Documentation       262       02APR07       01APR08         1132000040       Turnover B200 to Decommissioning       0       02APR08       02APR08         1132000050       Assume B200 fixed facility costs       786       02APR08       06APR11         1132000070       Perform B200 SWS       524       03APR09       06APR11         1132000080       Prepare B200 for Demolition & Bldg Shell - fire       524       21OCT10       23OCT12         Filtered Water Storage		
1132000010       Cease B200 Facility operations       0       02APR07*       Image: Cease B200 Facility operations       Perform B200 Shutdown Operations         1132000020       Perform B200 Shutdown Operations       262       02APR07       01APR08         1132000040       Turnover B200 to Decom Documentation       262       02APR07       01APR08         1132000050       Assume B200 fixed facility costs       786       02APR08       06APR11         1132000070       Perform B200 SWS       262       02APR08       02APR09         1132000070       Perform B200 for Demolition & Bldg Shell - fire       524       03APR09       06APR11         1132000080       Prepare B200 for Demolition & Bldg Shell - fire       524       210CT10       230CT12         Filtered Water Storage		
1132000020       Perform B200 Shutdown Operations       262       02APR07       01APR08         1132000030       Prepare B200 Decom Documentation       262       02APR07       01APR08         1132000040       Turnover B200 to Decommissioning       0       02APR08       Prepare B200 Decom Documentation         1132000050       Assume B200 fixed facility costs       786       02APR08       06APR11         1132000060       Prepare B200 for SWS       262       02APR09       06APR11         1132000070       Perform B200 SWS       524       03APR09       06APR11         1132000080       Prepare B200 for Demolition & Bldg Shell - fire       524       210CT10       230CT12         Filtered Water Storage		
1132000030       Prepare B200 Decom Documentation       262       02APR07       01APR08         1132000040       Turnover B200 to Decommissioning       0       02APR08       Image: Commissioning       Image: Commissi		
1132000040       Turnover B200 to Decommissioning       0       02APR08       Assume B200 fixed facility costs       786       02APR08       06APR11         1132000060       Prepare B200 for SWS       262       02APR08       02APR09       06APR11         1132000070       Perform B200 SWS       524       03APR09       06APR11       Perform B200 SWS       Perfo		
1132000050       Assume B200 fixed facility costs       786       02APR08       06APR11         1132000060       Prepare B200 for SWS       262       02APR08       02APR09         1132000070       Perform B200 SWS       524       03APR09       06APR11         1132000080       Prepare B200 for Demolition & Bldg Shell - fire       524       210CT10       230CT12         Filtered Water Storage		
1132000060       Prepare B200 for SWS       262       02APR08       02APR09         1132000070       Perform B200 SWS       524       03APR09       06APR11         1132000080       Prepare B200 for Demolition & Bldg Shell - fire       524       210CT10       230CT12         Prepare B200 for Demolition & Bldg Shell - fire         Filtered Water Storage		
1132000060       Prepare B200 for SWS       262       02APR08       02APR09         1132000070       Perform B200 SWS       524       03APR09       06APR11         1132000080       Prepare B200 for Demolition & Bidg Shell - fire       524       210CT10       230CT12         Prepare B200 for Demolition & Bidg Shell - fire       524       210CT10       230CT12         Filtered Water Storage		
Interest value       Construction       <	g Shell - fire	
1.1.03.442       Filtered Water Storage	lg Shell - fire	
Filtered Water Storage		
1134420000 Decommission B442 Facility 1,048* 01APR10 07APR14 Decommission B442 Facility		
1134420010 Cease B442 Facility operations 0 01APR10* Cease B442 Facility operations	♦	
1134420020 Perform B442 Shutdown Operations 262 01APR10 01APR11 Perform B442 Shutdown Operations		
1134420030 Prepare B442 Decom Documentation 262 01APR10 01APR11 Prepare B442 Decom Documentation		
1.1.03.456		
Engineering Tech, OD&T, Decommissioning		
1134560000 Decommission B456 Facility 1,570* 01APR10 06APR16 Decommission B456 Facility		
1134560010 Cease B456 Facility operations 0 01APR10 Cease B456 Facility operations	♦	
1134560020 Perform B456 Shutdown Operations 512 01APR10 16MAR12 Perform B456 Shutdown Operations		
1.1.03.464		
Health Sciences & Dosimetry		
1134640000 Decommission B464 Facility 742* 01APR04 02FEB07 Decommission B464 Facility		
1134640040 Turnover B464 to Decommissioning 0 03APR06 Turnover B464 to Decommissioning		
1134640050 Assume B464 fixed facility costs 80 03APR06 21JUL06 Assume B464 fixed facility costs		
1134640060 Prepare B464 for SWS 60 03APR06 23JUN06 Prepare B464 for SWS		
1134640070 Perform B464 SWS 80 03APR06 21JUL06 Perform B464 SWS		
1134640080 Prepare B464 for Demolition 60 26JUN06 15SEP06 Prepare B464 for Demolition		
1134640090 Perform B464 demolition 100 18SEP06 02FEB07		
1134640100 B464 Remediation Complete - Site Available 0 02FEB07 • B464 Remediation Complete - Site Available		
Start Date 01APR03 Early Bar MAST Sheet 8 of 27		
Finish Date 20DEC69 Progress Bar Document 3600-01620-067-003 Rev. R0 Date Revision	Checked /	Approved
Data Date     02APR03       Run Date     09MAR06 11:56   Critical Activity Critical Activity CRL 5 Year Implementation Plan		
Classic Schedule Layout		
© Primavera Systems, Inc.		

Activity	Activity	Orig	Early	Early							
ID	Description	Dur	Start	Finish	2006	2007		2008	2009	2010	2011
1.1.03.527					2006	2007		2008	2009	2010	2011
Ammonia/Hvd	rogen/Amine Tower										
1135270000	Decommission B527 Facility	1.310*	01APR10	08APR15					Decommission B527 F	acility	
1135270010	Cease B527 Facility operations		01APR10						Cease B527 Facility opera	ations	
1135270020	Perform B527 Shutdown Operations			01APR11					rm B527 Shutdown Opera		
1135270030	Prepare B527 Decom Documentation		01APR10						re B527 Decom Documen	_	
1.1.03.557		202	017411110	01741111							
1.1.05.557											
Hydrogon/H20	) Exchange Tower										
1135580000	Decommission B558 Facility	1 048*	01APR10	07APR14					Decommission B558 F	acility	
1135580010	Cease B558 Facility operations	,	01APR10	017411(14					Cease B558 Facility opera		
1135580020				01APR11					rm B558 Shutdown Opera		
	Perform B558 Shutdown Operations								re B558 Decom Documen		
1135580030	Prepare B558 Decom Documentation	262	01APR10	UTAPRTT				Fiepai			
1.1.03.9X3											
Doon											
B998	DE2 Essilition Chutdown Cost Allowance OAC	12.000	0240007*								
1139980000	PE3 Facilities Shutdown Cost Allowance - OAG	13,000	02APR07*	26JAN57							
1.1.04.109											
Stack Monitori							No		& Engineering Building F	Poadv	
	New CA-1 Office & Engineering Building Ready	0	01APR10*				ine	w CA-1 Onice	a Lingineering Dunuing r	(eauy	
1.1.04.241											
Disposal Area		0.000*	01APR05								
1142410000	Decommission B241 Facility	,		03APR13				Turne	over B241 to Decommissi	ning	
1142410040	Turnover B241 to Decommissioning		31MAR10						ssume B241 fixed facility	-	
1142410050	Assume B241 fixed facility costs		31MAR10					A			
1142410060	Prepare B241 for SWS	262	31MAR10	31MAR11					Prepare B241 for	5W5	
1.1.04.401											
Gate House			105555	4005555							
1144010030	Prepare B401 Decom Documentation		12DEC06	12DEC07				re B401 Decoi	m Documentation		
	Decommission B401 Facility		01APR08	U5APR12		ecommission B401 F					
1144010010	Cease B401 Facility operations		01APR08*					Cease B401	Facility operations		
1144010020	Perform B401 Shutdown Operations		01APR08	01APR09						Shutdown Operations	
1144010040	Turnover B401 to Decommissioning		02APR09							to Decommissioning	1
1144010050	Assume B401 fixed facility costs	524	02APR09	05APR11		Ass	sume B4	01 fixed facili	ty costs		
1144010060	Prepare B401 for SWS	262	02APR09	02APR10						Prepare B40	1 for SWS
Start Data			MAST			Sheet 9 of 27	7				
Start Date Finish Date	20DEC69	arly Bar		Document 3	600-01620-067-0		Dat	e	Revision	Checked	Approved
Data Date	02APR03	Progress Bar Critical Activity									
Run Date	09MAR06 11:56	Activity	´	CRL 5 Y	ear Implementat	on Plan					
				Clas	sic Schedule Lay	out					
	an Orational Inc.			0.00							
© Primave	era Systems, Inc.						$\vdash$				

Activity	Activity	Oria	Farly	Farly					
Activity ID	Description	Orig Dur	Early Start	Early Finish 200	6 2007	2008	2009	2010	
1144010070	Perform B401 SWS	262 0		5APR11			Perform B401 SV	ws	
1144010080	Prepare B401 for Demolition	262 0	5APR10 05	SAPR11			Prepare B401 for Demoliti	on	
1.04.407									
Fire Hall & Ga	arage								
1144070000	Decommission B407 Facility	1,048* 0	1APR08 05	SAPR12	Decommission B407 Fa	acility			
1144070010	Cease B407 Facility operations	0 0	1APR08*			Cease B407 Fac	cility operations		
1144070020	Perform B407 Shutdown Operations	262 0	1APR08 01	APR09			Perform B407 Shu	tdown Operations	
1144070030	Prepare B407 Decom Documentation	262 0	1APR08 01	APR09				om Documentation	
1144070040	Turnover B407 to Decommissioning	0 0	2APR09				Turnover B407 to	Decommissioning	
1144070050	Assume B407 fixed facility costs	524 0	2APR09 05	5APR11	Ass	ume B407 fixed facility	costs		-
1144070060	Prepare B407 for SWS	262 0	2APR09 02	APR10				Prepare B407	for S
1144070070	Perform B407 SWS	262 0	5APR10 05	5APR11			Perform B407 SV	ws	
1144070080	Prepare B407 for Demolition	262 0	5APR10 05	5APR11			Prepare B407 for Demoliti	on	
.1.04.432									
Main Library									
1144320000	Decommission B432 Facility	1,048* 0	1APR10 07	APR14			Decommission B432 Facil	ity	
1144320010	Cease B432 Facility operations	0 0	1APR10			Cea	ase B432 Facility operatio	ns🔶	
1144320020	Perform B432 Shutdown Operations	262 0	1APR10 01	APR11		Perform	B432 Shutdown Operatio	ns	
1144320030	Prepare B432 Decom Documentation	262 0	1APR10 01	APR11		Prepare I	3432 Decom Documentati	on	
.1.04.449									
Guard House	In Fence								
1144490000	Decommission B449 Facility	1,048* 0	1APR08 05	SAPR12	Decommission B449 Fa	acility			
1144490010	Cease B449 Facility operations	0 0	1APR08			Cease B449 Fa	cility operations		
1144490020	Perform B449 Shutdown Operations	262 0	1APR08 01	APR09			Perform B449 Shu	tdown Operations	
1144490030	Prepare B449 Decom Documentation	262 0	1APR08 01	APR09			Prepare B449 Dec	om Documentation	
1144490040	Turnover B449 to Decommissioning	0 03	2APR09				Turnover B449 to	Decommissioning	
1144490050	Assume B449 fixed facility costs	524 0	2APR09 05	5APR11	Ass	ume B449 fixed facility	costs		
1144490060	Prepare B449 for SWS	262 0	2APR09 02	APR10				Prepare B449	for S
1144490070	Perform B449 SWS	262 0	5APR10 05	5APR11			Perform B449 SV	ws	
1144490080	Prepare B449 for Demolition	262 0	5APR10 05	SAPR11			Prepare B449 for Demoliti	on	
.1.04.485									
Salt Storage									
1144850000	Decommission B485 Facility	1,048* 0	1APR05 07	APR09			Decommission B4	185 Facility	
1144850020	Perform B485 Shutdown Operations	262 0	1APR05 03	APR06 Perform	B485 Shutdown Operations				
1144850030	Prepare B485 Decom Documentation	390 0	1APR05 28	SEP06	Prepare B485 Decom Docu	imentation			
art Date	01APR03	Early Bar	MAST		Sheet 10 of 27		Devision		
nish Date ata Date	20DEC69 02APR03	Progress Bar	Do	cument 3600-0162	0-067-003 Rev. R0	Date	Revision	Checked	Ар
un Date	09MAR06 11:56	Critical Activity		CRL 5 Year Imple	mentation Plan				
				Classic Scheo	iule Layout				
© Primave	era Systems, Inc.								

Activity	Activity	Orig	Early	Early														
ID	Description	Dur	Start	Finish	2006 2007			2008				2(	009			20	10	2011
1144850040	Turnover B485 to Decommissioning	0	04APR06		Turnover B485 to Decommissi	oning												
1144850050	Assume B485 fixed facility costs	524	04APR06	04APR08				Assum	e B48	35 fix	ed fa	acility	costs	6				
1144850060	Prepare B485 for SWS	262	04APR06	04APR07	Prepare	B485 fo	r SWS	5										
1144850070	Perform B485 SWS	262	05APR07	04APR08				Perforn	n B48	35 SV	vs							
1144850080	Prepare B485 for Demolition	262	05APR07	04APR08				Prepare	e B48	5 for	Den	nolitic	on					
1144850090	Perform B485 demolition	262	07APR08	07APR09			4					Per	form l	B485 (	demol	tion		
1144850100	B485 Remediation Complete - Site Available	0		07APR09							•	♦В48	85 Rer	nedia	tion C	omplet	e - Site A	vailable
1144850110	Perform B485 final waste disposal	90	08APR09	11AUG09									P	erforr	n B48	5 final	waste dis	sposal
1.1.04.514																		
Emergency Ste	orage Building																	
1145140000	Decommission B514 Facility	655*	01APR08	04OCT10	Decommission	3514 Fac	ility											
1145140010	Cease B514 Facility operations	0	01APR08*					Cease E	B514	Facil	lity o	perat	ions					
1145140020	Perform B514 Shutdown Operations	131	01APR08	30SEP08			4		F	Perfo	rm E	3514 S	Shutdo	wn O	perati	ons		
1145140030	Prepare B514 Decom Documentation	131	01APR08	30SEP08			4		F	Prepa	ire B	514 D	ecom	Docu	menta	tion		
1145140040	Turnover B514 to Decommissioning	0	01OCT08						۲ 🄶	Turno	over	B514	to De	comm	ission	ing		
1145140050	Assume B514 fixed facility costs	262	01OCT08	01OCT09										Ass	ume E	514 fi	ced facili	ty costs
1145140060	Prepare B514 for SWS	131	01OCT08	01APR09								Pre	pare E	3514 f	or SW	S		
1145140070	Perform B514 SWS	262	02APR09	02APR10												Perfo	orm B514	sws
1145140080	Prepare B514 for Demolition	131	02OCT09	02APR10				Pre	pare	B514	for	Demo	lition	<b></b>		<b>7</b>		
1145140090	Perform B514 demolition	131	05APR10	04OCT10							Ре	rform	B514	demo	lition			
1145140100	B514 Remediation Complete - Site Available	0		04OCT10					B	3514	Rem	ediati	on Co	mple	te - Sit	e Avai	lable🔶	
1145140110	Perform B514 final waste disposal	1	05OCT10	05OCT10							I	Perfor	m B5	14 fina	al was	te disp	osal📈	
1.1.04.530																		
Change Room	1 & Storage																	
1145300000	Decommission B530 Facility	1,310*	01APR08	08APR13	Decommission	3530 Fac	ility 🖌											
1145300010	Cease B530 Facility operations	0	01APR08*				•	Cease E	B530	Facil	lity o	perat	ions					
1145300020	Perform B530 Shutdown Operations	262	01APR08	01APR09			4					Perf	form E	3530 \$	Shutdo	wn Op	erations	
1145300030	Prepare B530 Decom Documentation	262	02APR09	02APR10	P	epare B	530 D	ecom Do	ocum	entat	tion					<b>7</b>		
1145300040	Turnover B530 to Decommissioning	0	02APR09								•	Turi	nover	B530	to Dec	ommi	ssioning	
1145300050	Assume B530 fixed facility costs	786	02APR09	05APR12		Assur	ne B5	530 fixed	facili	ity co	sts	<u> </u>						
1145300060	Prepare B530 for SWS	262	05APR10	05APR11								Prepa	are B5	30 for	sws			
1.1.04.550																		
Change House	9																	
1145500000	Decommission B550 Facility	1,048*	01APR08	05APR12	Decommission	3550 Fac	ility											
1145500010	Cease B550 Facility operations	0	01APR08*					Cease E	B550	Facil	lity o	perat	ions					
1145500020	Perform B550 Shutdown Operations	262	01APR08	01APR09							1	<u> </u>		3550 \$	Shutdo	wn Op	erations	
Start Date	01APR03	Early Bar	MAST	1	Shee	11 of 27		<u> </u>								<u> </u>		
Finish Date	20DEC69	Progress Bar		Document 3	3600-01620-067-003 Rev. R0	-	Dat	te		-		Revisio	on		-	C	hecked	Approved
Data Date Run Date		Critical Activity	,	CRI 5 V	ear Implementation Plan	F												
						F	-								-			
				Cla	ssic Schedule Layout	F												
© Primave	era Systems, Inc.					F										_		
© Primave	era Systems, Inc.			Cla														

Activity	Activity	Orig	Early	Early																			
ID	Description	Dur	Start	Finish		2006			2007	7			20	08			20	09			201	10	2011
1145500030	Prepare B550 Decom Documentation	262	01APR08	01APR09															550 Deo	com I		nentatio	
1145500040	Turnover B550 to Decommissioning	0	02APR09														Turr	over l	B550 to	Dec	ommis	ssioning	
1145500050	Assume B550 fixed facility costs	524	02APR09	05APR11							Assu	me B	550 fix	ed fa	cility (	costs	<u> </u>						
1145500060	Prepare B550 for SWS	262	02APR09	02APR10																	Prepa	are B550	for SWS
1145500070	Perform B550 SWS	262	05APR10	05APR11													Pe	rform	B550 S	ws			
1145500080	Prepare B550 for Demolition		05APR10		-											Prepa	re B55	0 for l	Demolit	tion			
1.1.04.887	. <b>b</b>																						
JL Gray Buildi	ng																						
		262	01APR10	01APR11							s	hutdo	wn & [	Dispo	sition	JL Gr	ay & [	R Su	pport B	ldg			
1.1.04.9X4				-																			
PE4 Safe Shu	tdown Allowance - OAG																						
	PE4 Facilities Shutdown Allowance - OAG	13.000	02APR07*	26JAN57																			
1.1.05		.0,000	02,	200, 1101																			
General site																							
1150000149	Decommission CRL Stacks	10 961*	01APR08	05APR50			D	ecomn	nissic	on Cl	RL St	acks											
1150000200	Decommission CRL SLW & Delay Tanks	,		050CT22	1							-			D	ecom	nissio	on CR		& Del	av Ta	nks 🖊	
	lectrical Services	0,142	210EI 10	0000122																			
1150000510	Maintain Distributed Services - Decom Facilities	14 866	02APR03	24MAR60	-																		
	Monitoring & Surveillance	14,000	02/11/03																				
1150000305	Perform Legacy SLW M&S Yrs1-4	1 043	02APR03	30MAR07				P	Perfor	mle	vacv	siw	M&S	Yrs1-4									
1150000310	Perform Legacy SLW M&S until SLWCF transfer	,	02APR07	31MAR10	-				enen		Jguoj	02.11	male								Porfo	rm Lega	cy SLW M&
1150000320			31MAR10		-									ę		Consol	idatio	n Faci	ility Rea			in Lege	cy 0211 ind
1150000320	SLW Consolidation Facility Ready			30MAR12	-							Porfe	rm I e						r compl				
	Perform Legacy SLW M&S until transfer complete	522	UIAFRIU	JUMARTZ										guoj				anore			7		
DUCT157	Decempionian CBL B157 Stack Dust	440	01APR08*			Dec	commiss	sion Cl		57.5	tack	Duct											
1150000165	Decommission CRL B157 Stack Duct	440	UTAPRUS	07DEC09		Dec	,0111113			57 0	nack	Duct											
TANK103		000		00144 007									4000										
1150000205	Prepare Delay Tanks 1&2 DWPs		03APR06*	30MAR07					repar	re De	elay i	anks	1&2 D	WPS	Dre		D		D103	2 Dal			
1150000210	Prepare for Demolition B103 Delay Tank 1	262	21SEP10	21SEP11											PIE	epare i	or De	monue	on B103	5 Dela	ay ian		
TANK240												_	_	- · - <b>-</b>									
1150000257	Prepare B240 Tank1 Documentation		01JAN07*		-								bare B	240 T	ank1	Docun	nentat	ion			,		
	Prepare B240 Tank1 for SWS	585	02JAN08*	30MAR10		P	Prepare I	B240 I	anki	tor a	5005										·		
1.1.06																							
	acilities Authority & Support	10.00		4005554																			
1160000010	Provide CRL Decom Facilities Authority	16,620	03APR06	13DEC69																			
Start Date	01APR03	arly Por	MAST						She	et 12	of 27												
Finish Date	20DEC69	arly Bar Progress Bar		Document 3	3600-0	01620	-067-00	3 Rev				Da	te				Revisio	n			Ch	necked	Approved
Data Date Run Date	UZAPRU3	ritical Activity	/	CRL 5 Y	'	Implai	nontot:-		~														
				UKL 5 Y	ear I	inpien	nentatio	n Plar	1														
				Clas	ssic S	Schedu	ule Layo	out													_		
© Primave	era Systems, Inc.																						
STIMAV			1																				

Activity	Activity	Oria	Early	Early													
Activity ID	Activity Description	Orig Dur	Start	Finish		0000		0000			0					40	0011
1.2			<b>C</b> tait			2006 2007		2008			2	009			20	10	2011
1.4																	
1200000040	Decommission CRL WM Areas Affected Lands	7,834*	02APR03	11APR33													
1200000030	Decommission/Remediate CRL CA1/CA2 Affected	,		07APR64													
1200000050	Decommission CRL Experiment Sites Affected	,	26JUN06	02APR09								ommi	esion		vnoriu	nont Sit	es Affected L
	Decommission CRL Experiment Sites Anecleu	724	20301000	UZAF KU9							Dec	,omm	551011		лрепі	nent Si	es Anecieu L
1.2.02																	
CA2 1222000030	Monitor Inner Area Plumes	12 100	02APR03	17JUN53													
1222000040	Remediate Other Known Misc CA1/CA2 items		01APR05*	11APR12													
1222000050	Investigate Suspect Source Terms in CA2	1,834	01APR05*	11APR12													
1.2.02.4																	
Legacy Mixed			-	-				_		_							
1231000100	Process Nordion drums to WTC (remove C-14)		03APR06*					Process N	lordio	on drui	ns to	wтс	(remov	/e C-1	4)		
1231000110	Process WMAD waste drums for WTC feed	522	01APR08	31MAR10	Proc	ess WMAD waste drums for WTC	feed			-		-	-				
1.2.03.1																	
Current In-act																	
1231000065	Current Onsite Sanitary Landfill Monitoring	16,955	02APR03	27MAR68													
1231000060	Remediate Onsite Sanitary Landfill	262	01APR10*	01APR11				F	Remed	liate O	nsite	Sanita	ary Lai	ndfill			
CRESCNT																	
1231000010	Remediate Grey Crescent	524	01APR08*	02APR10			4								Rem	ediate C	Brey Crescent
DAWSON																	
1231000030	Remediate Dawson City	262	01APR10*	01APR11						R	emed	iate Da	awson	City			
M&S																	
1231000005	Perform CRL Supervised Area M&S non-WMAs	17,210	02APR03	19MAR69													
1231000000	Perform CRL Supervised Area M&S for WMAs		03APR06	20MAR69													
MISC				2011/2 11 100													
1231000080	Remediate Remediate Other Misc Supervised Area	1 834	01APR04*	12APR11													R
RIVER	Remediate Remediate Other Milde Supervised / Ted	1,004	017411404														
1231000067	Investigate & analyze river sediment	456	01JUL05*	30MAR07		Investigate & an	alvzo	rivor sodim	ont								
					Rom	ediate river sediment	aiyze	nver seum	ient								
1231000068	Remediate river sediment	979	02JUL07	31MAR11													
SHOOTR				0105511						Berry	dicto	Shar	ting Ra	nes			
1231000040	Remediate Shooting Range	262	01APR10*	U1APR11						Reme	uiate	51100	ung Ra	ange			
SWAMPS																	
1231000090	Fence/Reduce Fire Risk WMA/WMB Swamps	1,048	02APR03	06APR07		Fence/Reduce F	ire R	isk WMA/W		wamp	\$						
Start Date			MAST			Sheet 13 of 27											
Start Date Finish Date	20DEC69	arly Bar	MAST	Document 3	3600-0 <sup>-</sup>	1620-067-003 Rev. R0	Da	te			Revisi	on			С	necked	Approved
Data Date	02APR03	rogress Bar															
Run Date	09MAR06 11:56	critical Activity	y	CRL 5 Y	'ear In	plementation Plan									-		
				Clas	ssic Sc	hedule Layout											
				Cida													
© Primave	era Systems, Inc.																

Activity	Activity	Orig	Early	Early															
ID	Description	Dur	Start	Finish		2006		2007		20	08		2009		20	010		201	1
1.2.03.2																			
Glass Blocks 1	1	70.4*											Domodiat	Clas	s Blocks - s				
1232000030	Remediate Glass Blocks - see WMAs	/84"	03APR06	02APR09									Remediate	a Glas	S DIOCKS - S	see www	AS		
BOREHOL 1232000060	Demodiate Challey, Develope	0 100	01APR05*	101441/20															
	Remediate Shallow Boreholes				-							Dome	diate Deep	Porch					
1232000050	Remediate Deep Boreholes	3,930	01APR10*	23APR25								Reine		Dorei					
		400																	
	Remediate Waste Lysimeters Patch	460	26JUN06*	28MAR08	4					Rem	ediate	e Waste Lys	Imeters Pat	cn					
1.2.03.3.1																			
	Groundwater Treatment Systems	10.100	0040000	47.0.0150															
	Operate Chemical Pit Groundwater Treatment Sys	13,100	02APR03	17JUN53															
1.2.03.3.2																			
	Groundwater Treatment Systems	10,100	0040000	47.0.0150															
	Operate Spring B Groundwater Treatment System	13,100	02APR03	17JUN53															
1.2.03.3.3																			
	Groundwater Treatment Systems	10.100	0040000	47.0.0150															
	Operate Nitrate Plant Groundwater Treatment Sys	13,100	02APR03	17JUN53															
1.2.03.3.4																			
	Groundwater Treatment Systems	10.100	0000T00	0405050				Onorata S	outh C	wamp Gro	undur	ater Treatm	ant Suctom						
	Operate South Swamp Groundwater Treatment	13,100	08OCT09	24DEC59				Operate S	ouura	wanip Gro	unuw	ater meatin	ent System						
1.3																			
15																			
100000000		45 4 40*	0140005																
	Decommission CRL WM Areas	15,149^	01APR05	25APR63															
1.3.01.1																			
40																			
WMA A Sand		4 4 0 0	0040000	1100010															
1301100030	Do WMA A Sand Trench Pre-Recovery Monitoring		02APR03	11APR19	-														
1301100040	Turnover WMA A To Decommissioning	0	03APR06*		luri	nover	WMA Α Το Ε	Jecommissi	oning										
1.3.01.2																			
41																			
	Liquid Waste Tank 1		0040000		<b>.</b>														
L	Turnover WMA A To Decommissioning	0	03APR06		lur	nover	WMA Α Το Ε	Jecommissi	oning										
	Liquid Waste Tank 2																		
	Decommission WMA A Active Liq Waste Tank 2	1,306*		02APR12			4												
Start Date Finish Date	01APR03 20DEC69	Early Bar	MAST	Decument		01620	067 002 0	Sheet 14	of 27	Date			Revision			Checked		Approve	
Data Date	02APR03	Progress Bar			-000-0	01020	-067-003 R		E	Dale			NOVIDIUT			. ISONEU		.pp:0ve	<u>,</u>
Run Date	09MAR06 11:56	Critical Activity		CRL 5 Y	'ear I	mplen	nentation P	lan	-								—		
				Cla	ssic 9	Schedu	ule Layout		E										
				Clas	5510 3	Scheut	Layout		F										
© Primave	ra Systems, Inc.								⊢								+-		

Activity	Activity	Orig	Early	Early			
ID	Description	Dur	Start	Finish	2006 2007	2008 2009 2	2010 2011
1301201125	Characterize ALWT2 Tank Contents & Equipmt	261	02APR07*	31MAR08		Characterize ALWT2 Tank Contents & Equipmt	
1301201130	Recover WMAA Active Liquid Tank 2 Waste	261	01APR08	31MAR09		Recover WMAA Active Lic	uid Tank 2 Waste
1301201150	Perform WMA A Active Liq Waste Tank 2 Waste	261	01APR08	31MAR09		Perform WMA A Active Lie	q Waste Tank 2 Waste P
1301201140	Perform WMA A Active Liq Waste Tank 2 Remedial	1	01APR09	01APR09	Perform WMA A Active	Liq Waste Tank 2 Remedial w	
43							
WMA A Co Bu	Inker						
1301200700	Start WMA A Co Bunker Decommission	0	01APR10*			Start WMA A Co Bunker Decommission 🔶	
1301200720	Do WMA A Co Bunker Characterization	262	01APR10	01APR11		Do WMA A Co Bunker Characterization	
WMA A Split F	Rod						
1301201301	Decommission WMA A Split Rod	2,356*	01APR05	11APR14			
45							
WMA A 204 R	Rod Sections						
1301200910	Decommission WMA A 204 Rod Sections	262*	13JUN06	13JUN07		ission WMA A 204 Rod Sections	
1301200930	Perform WMA A 204 Rod Sections Waste	209	13JUN06	30MAR07		A 204 Rod Sections Waste Recovery	
1301200940	Perform WMA A 204 Rod Sections Remedial work	1	13JUN06	13JUN06	<b>X</b> Perform WMA A 204 Rod Section	ns Remedial work	
1301200950	Perform WMA A 204 Rod Sections Waste	262	13JUN06	13JUN07	Perform	WMA A 204 Rod Sections Waste Processing	
1301200960	Prepare 204 Rod Sections site Abandon case	262	13JUN06	13JUN07		204 Rod Sections site Abandon case	
1301200970	Do WMA A 204 Rod Sections final waste disposal	262	13JUN06	13JUN07		A 204 Rod Sections final waste disposal	
1.3.02.1		-					
62							
LDA Reactor	r Pit #2						
1302110030	Perform RP2 Pre-Recovery Monitoring	7,579	02APR03	19APR32			
1302110040	Cease Operations RP2 Pit	0	02APR08			Cease Operations RP2 Pit	
1302110050	Perform RP2 Pit Ops turnover to Decommissioning	0	02APR08			Perform RP2 Pit Ops turnover to Decommissioni	ng
63							
LDA - Reactor	- Pit #2-3						
1302120030	Perform RP(2)-3 Pre-Recovery Monitoring	7,562	02APR03	25MAR32			
1302120040	Cease Operations RP(2)-3 Pit	0	02APR08			Cease Operations RP(2)-3 Pit	
1302120050	Turnover RP(2)-3 Pit To Decommissioning	0	02APR08			◆Turnover RP(2)-3 Pit To Decommissioning	
LDA - Reactor		-					
1302130030	Perform RP(2)-4 Pre-Recovery Monitoring	7.562	02APR03	25MAR32			
1302130040	Cease Operations RP(2)-4 Pit	0	02APR08			Cease Operations RP(2)-4 Pit	
1302130050	Perform RP(2)-4 Pit Ops turnover to Decom		02APR08			Perform RP(2)-4 Pit Ops turnover to Decom	
64		0					
LDA - Reactor	Pit #1						
1302140030	Perform RP1 Pre-Recovery Monitoring	7.567	02APR03	01APR32			
1302140050	Perform RP1 Pit S/D Ops turnover to Decom		03APR06*		Perform RP1 Pit S/D Ops turnover t	Decom	
				1			
	0/40500						
Start Date Finish Date	20DFC691	arly Bar	MAST	Document ?	Sheet 15 of 3600-01620-067-003 Rev. R0	27 Date Revision	Checked Approved
Data Date	02APR03	rogress Bar					
Run Date	09MAR06 11:56	ritical Activity	´	CRL 5 Y	fear Implementation Plan		
				Cla	ssic Schedule Layout		
© Primave	era Systems, Inc.						

	Activity	Activity	Orig	Early	Early													
	ID	Description	Dur	Start	Finish	2006	;	20	07		2008		2009			2010		2011
1	.3.02.2.1																	
	61																	
	LDA - Chemic			1	_	_												
	1302210030	Perform CP1 Pre-Recovery Monitoring	6,787	02APR03	05APR29													
	1302210050	Perform CP1 Pit Ops turnover to Decom	0	03APR06*		Perform (	CP1 Pi	t Ops turnov	ver to Decor	n								
1	.3.02.2.2																	
	61																	
	LDA - Chemic			1	_	_												
	1302220030	Perform CP2 Pre-Recovery Monitoring		02APR03	24APR29													
	1302220050	Perform CP2 Pit Ops turnover to Decom	0	03APR06*		Perform (	CP2 Pi	t Ops turnov	ver to Decor	n								
1	.3.02.3																	
	62																	
	LDA - Laundry	y Pit				_												
	1302300030	Perform LP Pre-Recovery Monitoring	7,034	02APR03	18MAR30													
	1302300050	Perform LP Pit Ops turnover to Decom	0	03APR06*		Perform L	P Pit	Ops turnove	r to Decom									
	70																	
	LDA Pipelines		_															
	1302400030	Perform LDAPL Pre-Recovery Monitoring	7,295	02APR03	18MAR31													
	1302400040	Cease Operations LDA Pipelines	0	02APR08						, <b>♦</b> C	ease Ol	perations LD/	A Pipelines					
	1302400050	Perform LDA Pipelines Ops turnover to Decom	0	02APR08						<b>•</b> P	erform	LDA Pipeline	s Ops turno	ver to	Decon	า		
1	.3.03																	
	68																	
	Nitrate Plant E	Buildings																
	1303200030	Perform NPBLDG Pre-Recovery Monitoring	5,739	02APR03	31MAR25													
	Nitrate Plant F	Pit																
	1303100030	Perform NPPIT Pre-Recovery Monitoring	5,740	02APR03	01APR25													
1	.3.04																	
	68																	
	Thorium Pit																	
	1303400030	Perform ThorPit Pre-Recovery Monitoring	5,734	02APR03	24MAR25													
1	.3.05.1.1																	
	10																	
	WMAB Sand	Trenches -old																
	1305110030	Perform BSTold Pre-Recovery Monitoring	6,550	02APR03	09MAY28													
	.3.05.1.2																	
	12																	
	F	Trenches - new			1													
	1305120030	Perform BSTnew Pre-Recovery Monitoring		02APR03	30OCT35	-												
	1305120055	Do BSTnew Selected Liquids Retrievals	914	01OCT07*	31MAR11													Do
		1		_														
	art Date nish Date		Early Bar	MAST	Document	3600 04600	067		heet 16 of 27	Date			Revision			Checke	d I	Approved
	ata Date	02APR03	Progress Bar		Document	5000-01020	-1007-0	003 Rev. R0	,	Dale						Unecke		, ppioveu
Rı	un Date	09MAR06 11:56	Critical Activit	×	CRL 5 \	ear Impler	menta	tion Plan	-		_							
					Cla	ssic Sched	ule Le	vout	-									
					Cia			<i>j</i> 0 u t	-									
	© Primave	era Systems, Inc.																

Activity ID	Activity	Orig	Early	Early															
	Description	Dur	Start	Finish	2	2006			2007			2008		2009			20	10	2011
1.3.05.2																			
	t Lined Trenches																		
1305200030	Perform AsphaltTr Pre-Recovery Monitoring	7 031	02APR03	13MAR30															
1305200055	Do Ashpalt Trench Selected Liquid Retrievals		010CT07*		-														Do
1.3.05.3		011	0100101	o mu artiri															
00																			
WMA B Solver	nt Runkers																		
1305350010	Decommission WMAB Solvent Bunkers	286*	01APR05	05MAY06		commis	sion	WMA	AB Solve	ent Bunke	ers								
1305350090	Perform SolvB Waste Processing	524	01APR05	04APR07					Perfor	m SolvB \	Naste Pro	cessin	q						
1305350095	Prepare WMA B Solvent Bunkers site abandon		01APR05	05MAY06	Pre	pare WI	MA				abandon								
1305350065	Complete SolvB Waste Recovery SB1		03APR06	30MAR07					_		Waste Re		SB1						
01		200										,							
	r Concrete Bunkers (CD 16-56)																		
	Do Ops Turnover Circ Concrete Bunkers CD16-56	0	12APR10*								Do Ops	Furnov	er Circ Con	rete Bunke	rs CD	16-56			
03		-									-								
	Cartridge Disposal Bunkers																		
	Perform RCDB Pre-Recovery Monitoring	2.604	02APR03	25MAR13															
13		1																	
	r Concrete Bunkers (CD 57-185)																		
	Perform CDPCyl Pre-Recovery Monitoring	8,079	02APR03	20MAR34															
15																			
WMA B Concr	ete Tile Filter Bunker																		
1305330030	Perform CTFB Pre-Recovery Monitoring	9,654	02APR03	02APR40															
1.3.05.3.1																			
14																			
WMAB Rectan	gular Concrete Bunkers (CD 1-15)																		
1305310030	Perform CDPRect Pre-Recovery Monitoring	9,121	02APR03	17MAR38															
1.3.05.4																			
02																			
WMA B Bottle	Cribs																		
1305420030	Perform BotlCrib Pre-Recovery Monitoring	1,107	02APR03	28JUN07					P	erform B	otlCrib Pr	e-Reco	very Monito	ring					
1305420010	Decommission WMAB Bottle Cribs	1,662*	10FEB06	25JUN12															
1305420060	Perform BotlCrib Waste Recovery	360	10FEB06	28JUN07					P	erform B	otlCrib Wa	iste Re	covery						
1305420090	Perform BotlCrib Waste Processing	360	10FEB06	28JUN07					P	erform B	otlCrib Wa	ste Pr	ocessing						
05		·																	
WMA B Rat Pi	ts																		
1305460330	Perform RatPit 2 Pre-Recovery Monitoring	3,897	02APR03	08MAR18															
Start Date Finish Date		arly Bar	MAST	Dooumont		1620.00	27 0	- n 2 0 -		et 17 of 27	Date			Revision				hecked	Approved
Data Date	02APR03	rogress Bar		Document 3	5000-01	1020-06	0-10	us Ke	ev. KU	-	Dale			I CEVIBIUI I				INCONCU	Approved
Run Date	09MAR06 11:56	ritical Activity		CRL 5 Y	'ear Im	nplemer	ntati	on Pla	an	ŀ									
				Clar	eein Sa	hedule	Lav	out		-									
					3310 30	neuule	∟ay	Jui		ŀ									
© Primave	ra Systems, Inc.									ŀ		1							

Activity	Activity	Orig	Early	Early													
ID	Description	Dur	Start	Finish	2006		20	07		2008		20	09		2010		2011
06																	
WMA B SS Co	ontainers		I	I													
1305480030	Perform SSCont Pre-Recovery Monitoring	4,171	02APR03	27MAR19													
	od Bay Disposal Container		I	I													
1305470030	Perform SSRB Pre-Recovery Monitoring	4,177	02APR03	04APR19													
07																	
	s of Active Solution																
1305410030	Perform BAS Pre-Recovery Monitoring	4,434	02APR03	30MAR20													
WMA B Caust																	
1305440030	Perform CS Pre-Recovery Monitoring		02APR03	23MAR20	_												
1305440000	Start Decommission WMAB Caustic Cells		03APR06*		Start Deco	ommis	ssion WMAB										
1305440020	Perform CRL WM area CS Characterization	260	03APR06	30MAR07			Perf	orm C	RL WM area C	CS Charac	teriza	tion					
1305440050	Perform CS Ops turnover to Decom	0	03APR06		Perform C	S Op	s turnover to	o Dec	om								
1305440010	Decommission WMAB Caustic Cells	786*	02APR07	05APR10											Decommis	sion	NMAB Cau
1305440060	Perform CS Waste Recovery	392	02APR07	30SEP08							Perf	orm CS Was	ste Re	covery			
1305440090	Perform CS Waste Processing	392	02APR07	30SEP08							Perf	orm CS Was	ste Pro	ocessing			
1305440095	Prepare WMAB Caustic Cells site abandonment	262	03APR09	05APR10		Pr	epare WMA	B Caι	stic Cells site	abandon	nent	case		7	<b>7</b>		
WMA B Control	ol Units																
1305430030	Perform CU Pre-Recovery Monitoring	4,429	02APR03	23MAR20													
WMA B NRU	Rod Sections																
1305450030	Perform NRU-RS Pre-Recovery Monitoring	4,429	02APR03	23MAR20													
1305450000	Start Decommission WMAB NRU-Rod Sections	0	03APR06*		Start Deco	ommis	ssion WMAE	NRU	-Rod Sections	5							
1305450020	Perform CRL WM area NRU-RS Characterization	260	03APR06	30MAR07			Perf	orm C	RL WM area N	NRU-RS C	harac	terization					
1305450050	Perform NRU-RS Ops turnover to Decom	0	03APR06		Perform N	RU-R	S Ops turno	ver to	Decom								
1305450055	Perform NRU-RS Selected Retrievals 2&3	260	01APR08	30MAR09								Perf	orm N	RU-RS Sele	cted Retrie	vals 2	≩3 Compar
09																	
WMA B Rat P	its																
1305460030	Perform RatPit 1 Pre-Recovery Monitoring	5,474	02APR03	25MAR24													
1.3.05.4.9																	
08																	
NRX Thermal	Shield																
1305490030	Perform WMB NRXTS Pre-Recovery Monitoring	4,695	02APR03	30MAR21													
1.3.05.5																	
06																	
WMA B Cell V			1														
1305500030	Perform CW Pre-Recovery Monitoring	4,164	02APR03	18MAR19													
Start Date	01APR03		MAST					heet 1	8 of 27								
inish Date	20DEC69	arly Bar rogress Bar		Document 3	3600-01620	-067-	003 Rev. R		Date			Revisio	n		Checked		Approved
Data Date Run Date		ritical Activity	,		(	1	tion Dire									_	
				GRL 5 Y	ear Implen	nenta	tion Plan										
				Cla	ssic Schedu	ile La	yout									_	
© Primave	era Systems, Inc.														1		
© Primave	era Systems, Inc.														1		

Activity	Activity	Orig	Early	Early														
ID	Description	Dur	Start	Finish		2006	<b>;</b>	2007	1	20	08		2009		2	010	2	011
1.3.05.7																		
07																		
WMA B NRX/N		4 404	0040000	40144 500														
	Perform Calandria Pre-Recovery Monitoring	4,424	02APR03	16MAR20														
1.3.05.8																		
02																		
	Slightly Active Solvents in Bottles			00000044														
	Do WMAB Spec Burial SAS Pre-Recovery	,	02APR03	30MAR11														Do
1305801500	Start Decommission WMAB Special Burials SAS		03APR06*				ommission	-										
1305801502	WMAB Special Burials SAS Ops turnover to Decom		03APR06*		<b>W</b> M	AB Sp	pecial Burial	s SAS Ops	turnov	er to Decoi	n	_						
1305801510	Do WMAB Special Burial SAS Characterization	260	02APR08	31MAR09										Speci	al Burial S	AS Chara	cterizat	tion
1305801501	Decom WMAB Slightly Active Solvents in Bottles	783*	01APR09	30MAR12			Dec	om WMAB \$	Slight	y Active So	lvents i	n Bottles						
1305801520	Do WMAB Special Burial SAS Waste Recovery	261	01APR09	31MAR10			D	o WMAB Sp	pecial	Burial SAS	Waste F	Recovery						
1305801530	Do WMAB Special Burial SAS Waste Processing	261	01APR09	31MAR10			Do	WMAB Spe	cial B	urial SAS W	aste Pro	ocessing						
1.3.05.9.1																		
20																		
WMAB THs Fu	el /Mo99 Waste Recovery & Safety Case																	
1305910060	Retrieve THR1 Reactive Fuel Long Rods	524	01APR10	03APR12						F	letrieve	THR1 Rea	active Fuel I	.ong R	lods 🔼 📃			
1.3.05.9.2																		
21																		
WMAB TH Stru	uctures IFE 1-4, IMD 1-4																	
1305920030	Do WMAB IFE/IMD1-4 TH Struct PreRecovery	13,320	02APR03	21APR54														
WMAB TH Stu	ctures IFE5-6,21-27, IMD 5-6,21-27																	
1305921025	Do rest WMB IFE/IMD TH Struct PreRecover	16,784	02APR03	01AUG67														
1.3.05.9.4																		
22																		
	99 THs Structures Decommissioning																	
	Perform WMAB IRP Mo99 TH Pre-Recovery	8,472	02APR03	20SEP35														
WMAB IRP No	n-Mo99 TH Structures Decommisioning	-																
	Do Non-Mo99 IRP THs Struct Pre Recover Monitor	10.977	02APR03	27APR45														
1.3.05.9.5		,																
25																		
	le Hole Stabilization IFE1-4.IMD1-4																	
	Perform WMAB Fuel Tilehole Stabilization (THIS)	2.096*	02APR03	13APR11														Pe
	Do THIS remediation YR3( can tooling,pump THs)		05APR05	05APR06	Do -	THIS r	remediation	YR3( can to	olina.	pump THs)								
1305950050	Do THIS remediation YR4(can puncture.inspect)		06APR06	06APR07						iation YR4(c	an pun	cture.insp	ect)					
1305950060	Do THIS remediate YR5 (inspect & test retrieval)		09APR07	08APR08	-								R5 (inspect	& tast	retrieval)			
1305950065	Perform WMAB Non-Fuel Tilehole Investigation			13APR11								inculate m	to (mspeer		retrieval)			Pe
													Do THIS r	omodi	otion VD6	(M.o. 00 TL	Ja inan	
1305950070	Do THIS remediation YR6 (Mo-99 THs inspection)	262	09APR08	09APR09										emeai	ation 1R6	(100-99 11	is inspe	ection)
tart Date	01APR03		MAST					Sheet 19	9 of 27									
inish Date	20DEC69	arly Bar rogress Bar		Document 3	3600-0	01620	)-067-003 R			Date			Revision			Checked	Appro	ved
eta Date tun Date	UZAPRUS	ritical Activity	,					1										
Jan Date		,		CRL 5 Y	ear I	mpler	mentation P	ian										
				Cla	ssic S	ched	ule Layout											
	ra Systems, Inc.						-											
@ Fiillavel			1													-		

ID         Description         Dur         Start         Finish         2007         2008         2009         2010           1305950080         Do THIS remediation YR7(Mo-99 THs inspection)         262         10APR09         12APR10         Do THIS remediation YR7(Mo-99 THs inspection)         The mediation YR7	. ,
1305950090       Do THIS remediation YR8       262       13APR10       13APR11         1305950090       Do THIS remediation YR8       262       13APR11       Do THIS remediation YR8       Do THIS remediation YR8         1305950090       Do THIS remediation YR8       262       13APR11       Image: Comparison of the point of	. ,
13.06       000       0.000       0.0000000       0.0000000       0.0000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.00000000       0.000000000       0.0000000000       0.00000000000000000000000000000000000	. ,
65       VMA C       VMA C Pre-Safety Case/Cover Monitoring       1.310       02APR03       08APR08       VPre-Verform VMA C Pre-Safety Case/Cover Monitoring       1.310       02APR03       08APR08       VPre-Verform VMA C Pre-Safety Case/Cover Monitoring       MAR         1306000030       Perform VMA C Site abandonment initial analysis       260       03APR06       20MAR13       VPre-Verform VMA C Site abandonment initial analysis       VPre-Verform VMA C Site abandonmen	. ,
WMA C       1306000030       Perform WMA C Pre-Safety Case/Cover Monitoring       1,310       02APR03       08APR08       Perform WMA C       Pre-Safety Case/Cover Monitoring       1,824       03APR06       28MAR13       Perform WMA C       Pre-Safety Case/Cover Monitoring       1,824       03APR06       28MAR13       Perform WMA C       Pre-Safety Case/Cover Monitoring       1,824       03APR06       28MAR13       Perform WMA C       Pre-Safety Case/Cover Monitoring       1,824       03APR06       28MAR13       Perform WMA C       Site abandonment initial analysis       260       03APR06       30MAR07       Prepare WMA C       Site abandonment initial analysis       260       03APR06       30MAR07       Perform WMA C       Perform WMA C       Site abandonment initial analysis       260       02APR07       31MAR09       Perform WMA C       Perform WMA C       Site abandonment initial analysis	. ,
1306000030       Perform WMA C Pre-Safety Case/Cover Monitoring       1,310       02APR03       08APR08         1306000010       Decommission CRL Waste Management Area C       1,824*       03APR06       28MAR13         1306000095       Prepare WMA C site abandonment initial analysis       260       03APR06*       30MAR07         1306000097       Prepare WMA C site abandonment safety case       522       02APR07       31MAR09         1306000097       Perpare WMA C site abandonment safety case       522       02APR07       31MAR09         1306000070       Perform WMAC Post Safety Case Monitoring       15,900       02APR08       12MAR09         1307000030       Perform WMAC Post Safety Case Monitoring       15,900       02APR08       12MAR09         1307000030       Perform TankFarm Pre-Decommissioning       2,899       02APR03       12MAY14         13.08       7       7       7       7       7	. ,
1306000010       Decommission CRL Waste Management Area C       1,824       03APR06       28MAR13       Image: Control Contenter Contenter Control Control Contenter Control Contr	. ,
1306000095 Prepare WMA C site abandonment initial analysis 260 03APR06 30MAR07   1306000080 Perform WMAC Site Remedial work (Cover) 522 02APR07 31MAR09   1306000097 Prepare WMA C site abandonment safety case 522 02APR07 31MAR09   1306000070 Perform WMAC Post Safety Case Monitoring 15,000 02APR08 12MAR09   1307 1307 1307 1307 1307   67 130700030 Perform TankFarm Pre-Decommissioning 2,899 02APR03 12MAY14   13.08 13.08 12MAR09 12MAY14	. ,
130600080       Perform WMAC Site Remedial work (Cover)       522       02APR07       31MAR09         1306000097       Prepare WMAC Site abandonment safety case       522       02APR07       31MAR09       Prepare WMAC Site abandonment safety case       Site abandonment s	. ,
1306000097       Prepare WMA C site abandonment safety case       522       02APR07       31MAR09       Image: Control of the	. ,
1306000070       Perform WMAC Post Safety Case Monitoring       15,900       02APR08       12MAR69       Image: Control of the control of th	
1.3.07       67         Tank Farm       1307000030       Perform TankFarm Pre-Decommissioning       2,899       02APR03       12MAY14         1.3.08       71 <td< td=""><td></td></td<>	
67       Tank Farm       I 20700030       Perform TankFarm Pre-Decommissioning       2,899       02APR03       12MAY14       I 200000000       I 2000000000000000000000000000000000000	
Tank Farm         1307000030       Perform TankFarm Pre-Decommissioning       2,899       02APR03       12MAY14       Image: Colspan="6">Image: Colspan="6" Image: Colspa="" Image: Colspan="" Image: Colspan="6" Image: Colsp	
1307000030       Perform TankFarm Pre-Decommissioning       2,899       02APR03       12MAY14       Image: Constraint of the constrain	
1.3.08       71	
71	
1308000030         Perform WMA D Pre-Recovery Monitoring         9,649         02APR03         26MAR40	
WMA E         130900030         Perform WMA E Pre-Safety Case Monitoring         2,086         02APR03         30MAR11	Per
	- Fen
1309000095 Prepare WMA E site abandonment safety case 262 02APR10 04APR11	
1.3.10	
67	
1310000030     Perform WMA F Pre Cover Monitoring     2,092     02APR03     07APR11	Per
1310000050 Perform WMA F Facility Ops Turnover to Decom 0 03APR06*	
1310000020 Perform CRL WM area WMA F Characterization 522 01APR08 31MAR10	CRL WM area WM
1.3.11	
73	
WMA G - CANDU Fuel Only	
1311000030 Perform WMA G Cannisters Pre-Decomm 14,875 02APR03 06APR60	
Start Date 01APR03 Early Bar MAST Sheet 20 of 27	
Finish Date 20DEC69 Progress Bar Document 3600-01620-067-003 Rev. R0 Date Revision Checke	d Approved
Data Date     02APR03       Run Date     09MAR06 11:56   Critical Activity Critical Activity CRL 5 Year Implementation Plan	
Classic Schedule Layout	
© Primavera Systems, Inc.	

			_							
Activity ID	Activity Description	Orig Dur	Early	Early						
	Description	Dur	Start	Finish	2006	2007	2008	2009	2010	2011
1.3.12										
72										
WMA H	Derform W/MA H Dro Docovery Menitering	10.066	02APR03	06APR50	_					
1312000030	Perform WMA H Pre-Recovery Monitoring	12,200	UZAPRU3	0642850						
1.3.13										
67	2 mm and 1									
Bulk Storage ( 1313000030	Perform BulkStore Pre-Recovery Monitoring	1 824	02APR03	29MAR10					Perform Bulk	Store Pre-Re
1313000010	Decommission CRL Bulk Storage Waste Area	7 -	02APR08	31MAR11	-					
1313000010	-		02APR08	31MAR09	_			Porform BulkSt	ore Waste Recovery	
	Perform BulkStore Waste Recovery				_					
1313000090	Perform BulkStore Waste Processing		02APR08	31MAR09	_		Bronoro Bully Sto		ore Waste Processir	ig
1313000095	Prepare Bulk Storage site abandonment case		01APR10	31MAR11				rage site abandonment		
1313000100	Perform BulkStore final waste disposal	262	06APR10	06APR11			Perform B	ulkStore final waste dis	posal	
1.3.15										
69										
Glass Blocks 1				-						
1315000030	Perform Glass Blocks Pre-Recovery Monitoring	,	02APR03	25MAR30						
1315000000	Start Decommission CRL Glass Blocks Waste		03APR06*		-1	ission CRL Glass Bloo				
1315000002	CRL Glass Blocks Waste Ops Turnover to Decom		03APR06*		CRL Glass Blo	cks Waste Ops Turno	ver to Decom			
1315000010	Decommission CRL Glass Blocks Waste		03APR06	02APR09				Decommission	CRL Glass Blocks V	/aste
1315000020	Perform CRL Glass Blocks Characterization	1	03APR06	03APR06	Perform CRL 0	Blass Blocks Characte	erization			
1315000060	Perform Glass Blocks Waste Recovery	260	03APR06	30MAR07		Perform Glass	s Blocks Waste Recover	y		
1315000090	Perform Glass Blocks Waste Processing	260	03APR06	30MAR07		Perform Glass	s Blocks Waste Process	ing		
1315000095	Prepare Glass Blocks site abandonment case	260	04APR08	02APR09				Prepare Glass	Blocks site abandon	ment case
1315000100	Perform Glass Blocks final waste disposal	260	04APR08	02APR09				Perform Glass	Blocks final waste di	sposal
1.3.16										
68										
Current In-acti	ve Landfill									
1316000030	Do Inactive Landfill Pre-Closure Monitoring	2,149	02APR03	27JUN11						
1.3.97										
AECL / NWMC	D Interface									
1397000020	NWMO interface until recommendation accepted	1,043	02APR03	30MAR07		NWMO interfa	ace until recommendatio	n accepted		
1397000025	NWMO interface after recommendation accept	2,620	02APR07	14APR17						
1.3.98				·						
Strategic Asse	ess & Plan General Support									
1398000100	Perform Waste Volume/Cost Modeling	3,144	02APR03	20APR15						
1398000110	Provide Cost Estimating & Specialist Support	3,144	02APR03	20APR15						
Ota t Data	0440000		h4407							
Start Date Finish Date	20DEC691	arly Bar	MAST	Document	3600-01620-067	Sheet 21 of 2	27 Date	Revision	Checked	Approved
Data Date	02APR03	rogress Bar		Booument	000-01020-007	000 1.00. 1.0				
Run Date	09MAR06 11:56	critical Activity	(	CRL 5	Year Implement	ation Plan				
				Cla	ssic Schedule L	avout				
_						ayour				
© Primave	ra Systems, Inc.									

Activity	Activity	Orig	Early	Early																
ID	Description	Dur	Start	Finish	2006	<b>i</b>	20	07		200	3		20	09		2	010		201	11
1.4.02																				
	Plume Updates	-		1																
1420000000	Perform RP2 Plume updates		10APR06	15JUL69									_				<b>_</b>			
1420000010	Perform RP2 next 10 Yr Plume Update -2006,2008	786	10APR06*	13APR09		-							Per	form	RP2 r	ext 10 Yr F	'lume L	Jpdate	-2006	6,200
1.4.04																				
WM Area A P																				
1440000000	Perform WMA A Sand Trench Plume updates		03APR06	05JUL68																
1440000010	Perform WMAA next 10 YR Plume Update	524	03APR06*	03APR08		_				Perfor	m WMAA	A next	10 YR	Plum	e Upc	late -2006,2	:007			L
1.4.05																				
WM Area B P																				
	Perform WMA B Plume updates	16,242*	01APR04	02JUL66																
1.4.06																				
WM Area C P																				
1460000000	Perform WMA C Plume updates		03APR06	05JUL67															_	
1460000010	Perform WMA C next 10 Yr Plume Update (2006)		03APR06*				Perf	orm V	VMA C nex	ct 10 Yr P	lume Upo									
1460000020	WMA C Trenches Remedial Action Complete	0		31MAR09									WM/	A C Tr	enche	es Remedia	I Action	n Com	plete	
1.4.07																				
WM Area F P																				
1470000000	Perform WMA F Plume updates	17,292*	02APR03	11JUL69														<b>└───</b>		
1.4.08																				
Nitrate Pit Plu																				
	Perform NPPIT Plume updates	15,936*	02APR03	30APR64																
1.4.09																				
	fill Plume Updates																			
1490000000	Perform WM Inactive Landfill Plume updates	15,936*	01APR04	30APR65																
6.1.01.1																				
	learance Facility	1 00 11	0040000	04144 500							NAF Clea		<b>F</b> aa:13							
6111000010	Build WAF Clearance Facility		02APR03	31MAR08										LY						
6111000044	WAF PM & Design Support Yr3		03APR06	27NOV07							sign Sup									
6111000050	Procure/Construct WAF Facility, Services & Equip		03APR06	18DEC07							struct WA									
6111000060	Train Operators & Commission WAF Facility	106	05NOV07	31MAR08						V Train (	Operators	s & Coi	nmis	sion V	VAF Fa	acility				
Start Date Finish Date	20DEC691	arly Bar	MAST	Document ?	8600-01620	067-	s 003 Rev. R0	heet 22 )		ate			Revisio	n			Checked		Approve	ed
Data Date	02APR03	rogress Bar				-1007-	OUD NEV. RU	,										<u> </u>		
Run Date	09MAR06 11:56	ritical Activity		CRL 5 Y	ear Impler	menta	ation Plan											—		
				Cla	ssic Sched	ule I a	avout											1		
a = :							.,											+		
© Primave	era Systems, Inc.		1															+		

Activity	A still its	0		E.																				
Activity ID	Activity Description	Orig Dur	Early Start	Early Finish																				
6111000062	WAF Clearance Facility Ready For Operation		01APR08	1 111311		2006	; 			20	07				2008 VE Clea	arance	Facil	200 ity Read		r Oner	ration	2010		2011
6111000070	Operate WAF Facility			01JUN48			-			Opera	ate W	AF Fa	acility				, aon	ity near	ayro	, obei	ution			
6111000080	Assume WAF Facility Maintenance & Fixed Costs	- /		01JUN48						-														
	Assume war raciily Maintenance & rixed Costs	10,480	UTAFRUO	0130140																				
6.1.01.2																								
6112000010	naracterization Facility Build Waste Characterization Facility (WCF)	707*	01APR08	20APR11	Buil	d Was	ste (	Char	acter	izatio	n Fac	ility (	WCF											
6112000020	Start WCF Project		01APR08	01APR08				- nan	40101	Lutio				<u> </u>	art WC	E Droi	oot							
	Develop WCF Concept ,Estimates & siting		02APR08	11NOV08	-													WCE	Cono	ont E	otimot	tes & sitin	~	
6112000030									Provi	do W(		12.0	ociar	Eiold	Supp		evelo		Conc	epr,⊏	Sumai		y	
6112000032	Provide WCF PM & Design Field Support		12NOV08	15NOV10	-			ľ					-		Licer	_								
6112000040	Design WCF Facility & Obtain License		12NOV08	12NOV09			_			-			1		Servic									
6112000052	Prepare WCF Site & Install Services		12NOV08	12NOV09	-			_		•														
6112000054	Procure WCF Facility Process Equipment		12NOV08	15NOV10	-			Р	rocu	re wC	r ra	sinty I	PTOC		quipme									
6112000050	Procure & Construct WCF Facility		13NOV09	15NOV10	-									PI				t WCF F						
6112000062	Develop WCF Procedures & QA		13NOV09	15NOV10											Devel	1 I		cedures		_				
6112000060	Train Operators & Commission WCF Facility		16NOV10	20APR11														-				WCF Faci		
6112000080	Assume WCF Maintenance & Fixed Costs	10,480	16NOV10	16JAN51													Assı	ime WC	F Ma	intena	ince &	Fixed Co	sts	
6.1.01.3																								
Special Equipr																								
6111000300	Procure/Install Inactive Size Reduction Equip			01APR09					_						1				ure/In	stall	nactiv	ve Size Re	ductio	n Equip
6111000200	Procure & Commission Metals Decontam Equip		01APR09*	04APR11											s Deco									
6111100015	Procure & Install Special Decom Equipment	1,827*	01APR09	31MAR16											Decom									
6111000310	Operate Inactive Size Reduction Equipment	13,100	02APR09	18JUN59						Oper	ate In				uction									
6112000200	Procure/Install Active Size Reduction Equip	262	13NOV09	15NOV10								Pr	rocur	e/Inst	all Ac	tive Si		duction						
6112000210	Operate Active Size Reduction Equipment	13,100	16NOV10	31JAN61													Oper	ate Acti	ive Si	ze Reo	ductio	n Equipm	ent	
6.1.01.4																								
	ation Program (Pre-WAF)																1				_			
6111000066	Prepare for WAF - Procs, Equipment Developmt	616	21NOV05	31MAR08		-						-		Pre	epare	or WA	F - Pr	ocs,Equ	uipme	ent De	velopr	nt		
6.1.02																								
CRL Shielded		E 4344	014550 (	00144 505																				
6120000010	CRL Phase 1 Shielded Facilities (B234 20yr ext)		01APR04	20MAR25																				
6120000060	Do SF Upgrades Licensing, PM support	,	02APR04	30MAR12																				
6120000061	Do SF Upgrades DSRP Mngmt		02APR04	30MAR12																				
6120000034	Design/Buy/Install/Comm B234 Ext/DSC/Vent		01APR05*	31MAR10																		Design/B	uy/Ins	tall/Comm
6120000056	Perform SF Upgrades Training & Commissioning		04APR05*	30MAR12						-														
6120000024	Perform B234 SF Upgrades Yr3	260	03APR06	30MAR07					Y	Perfo	orm B	234 S	SF Up	ograde	es Yr3									
Start Date		arly Bar	MAST								heet 23	3 of 27			-							1	. 1	
Finish Date Data Date	20DEC69 02APR03	rogress Bar		Document 3	3600-	01620	)-06	57-00	)3 Re	ev. R0	)			Date				Revision	1			Checke	d	Approved
Run Date	09MAR06 11:56	ritical Activity	'	CRL 5 Y	'ear	mpler	mer	ntatio	on Pl	an														
						•							<u> </u>									+	_	
				Clas	SSIC S	Schedu	uie	саус	out															
© Primave	ra Systems, Inc.												<u> </u>											

Activity	Activity	Orig	Early	Early						
ID	Description	Dur	Start	Finish	2006	2007	2008	2009	2010	2011
6120000036	Design/Buy/Install/Com SF Fire Detect/Suppress	-	03APR06*	31MAR09				Design/Buy/Install/Co	om SF Fire Detect	Suppress
6120000046	Design/Buy/Install/Comm SF Electric Distribution	1,042	03APR06*	30MAR10					Design/Buy/Inst	all/Comm S
6120000048	Design/Buy/Install/Comm SF Active Drainage Sys		03APR06*	30MAR07		Design/Buy/Inst		ctive Drainage Sys		
6120000051	Design/Buy/Install Shielded Isolation Room		03APR06*	31MAR08				Buy/Install Shielded Isolation Room		
6120000053	Design/Install UC 1&2 door maintainability		03APR06*	31MAR08			Design/I	nstall UC 1&2 door maintainability		
6120000055	Perform B234 Upgrades Environmental		03APR06*	31MAR09	<u>\</u>			Perform B234 Upgrad	les Environmenta	l Assessme
6120000025	Perform B234 SF Upgrades Yr4		02APR07	31MAR08			Perform	B234 SF Upgrades Yr4		
6120000032	Perform B234 SF Cell Decontamination	-	02APR07*	30MAR09				Perform B234 SF Cel		1
6120000026	Perform B234 SF Upgrades Yr5		01APR08	31MAR09				Perform B234 SF Upg	grades Yr5	
6120000027	Perform B234 SF Upgrades Yr6		01APR09	31MAR10				pgrades Yr6		
6120000044	Design/Buy/Install/Comm SF Alarm Annunciation		01APR09*	30MAR11		Design/Buy/Install/Co				
6120000054	Replace SF Fumehoods		01APR09*					Fumehoods		
6120000070	Operate Refurbished B234 Hotcells (with DSC)		01APR09	20MAR25		Operate Refurbishe	ed B234 Hotcell			
6120000028	Perform B234 SF Upgrades Yr7	261	01APR10	31MAR11				Perform B234 SF Upgrades Yr7		
6.1.03.2										
F	Naste Storage	1 004	0040007*	00144 D40						
1160000070	Provide Interim Waste Storage - Contam Soil etc	1,304	02APR07*	29MAR12						
6.1.03.3										
SMACS Into	rim Bunker Replacement Storage									
6133000065	Decom Waste SMAGS storge costs in lieu	1 700	17SEP07	21MAR14						
6133000012	Build Interim LLW SMAGS2 Facility	,	01APR10	07APR14				Build Interim LLW SMAGS2 Facility		
6133001000	Start Interim LLW SMAGS 2 Project	,	01APR10*					Start Interim LLW SMAGS 2 Project		
6133001010	Interim LLW SMAGS 2 Facility PM & Support	-	01APR10	07APR14				LW SMAGS 2 Facility PM & Support	I I I	
6133001020	Do PM & Support LLW SMAGS 2 YR1	,	01APR10	01APR11				PM & Support LLW SMAGS 2 YR1		
6133001060	Start PM & Support LLW SMAGS 2		01APR10					Start PM & Support LLW SMAGS 2		
6133001070	Design & License Interim LLW SMAGS 2 Facility		01APR10	01APR11				ense Interim LLW SMAGS 2 Facility	I	
6133001080	Do Design & License LLW SMAGS 2 YR1		01APR10	01APR11			-	esign & License LLW SMAGS 2 YR1		
6133001120	Start Design & License LLW SMAGS 2		01APR10					art Design & License LLW SMAGS 2		
6.1.04.1.1	Start Design & Electise EEW Shinker 2	0	017411010						<b>Y</b>	
0.1.04.1.1										
SLW Retrieva	I & Consolidation Facility									
6141100010	Build SLW Retrieval & Consolidation Facility	1,564*	02APR03	30MAR09				Build SLW Retrieval a	& Consolidation F	acility
6141100050	Procure SLW Consolidation Facility		01APR04	31MAR08				SLW Consolidation Facility		
6141100041	Complete Final Detail Design SLWCF	521	03APR06*	31MAR08			Complet	te Final Detail Design SLWCF		
6141100083	SLWCF (LWTS) Project FY06/07 Costflow	260	03APR06	30MAR07		SLWCF (LWTS)	Project FY06/07	7 Costflow		
6141100059	Prepare For SLW Transfer Ops (TPDP) Yrs2-4	855	21DEC06	31MAR10					Prepare For SL	N Transfer
6141100055	Construct SLW Consolidation Facility	521	02APR07	30MAR09				Construct SLW Cons	olidation Facility	
Start Date	01APR03	Early Bar	MAST	1	I I	Sheet 24 of 27	<u> </u>		· · · · · · · · · · · · · · · · · · ·	· · · · ·
Finish Date		Progress Bar		Document 3	600-01620-067	7-003 Rev. R0	Date	Revision	Checked	Approved
Data Date Run Date		Critical Activity	,	CRI 5 Y	ear Implement	tation Plan				
					·	-				
				Clas	sic Schedule L	Layout				
© Primave	era Systems, Inc.					-				

Activity	Activity	Orig	Early	Early													
ID	Description	Dur	Start	Finish		2006	3	20	07		2008		200			2010	2011
6141100084	SLWCF (LWTS) Project FY07/08 Costflow		02APR07	31MAR08	-					SL	WCF (L	WTS) Proje					
6141100060	Train Operators & Cold Commission SLWCF	-	31MAR08	30MAR09	-									•	ators & Cold (		
6141100085	SLWCF (LWTS) Project FY08/09 Costflow		01APR08	31MAR09	-				L		0			SF (LV	VTS) Project F	Y08/09 Co	stflow
6141100070	Hot Commission & Operate SLWCF	,	31MAR09	30MAR46	_		Derform			ot Commission & iintenance/Upgi							
6141100080	Perform SLWCF Maintenance/Upgrades & fixed	,	31MAR09	25MAR60	_		Periorii	I SLW						Eagil	ity Ready		
6141100061	SLW Retrieval & Consolidation Facility Ready		31MAR10	0140510	_							SLW Tank					
6141100062	Retrieve Legacy SLW Tank Waste to new SLWCF	783	01APR10	01APR13						Retrieve	Leyacy		vvasie	to nev			
6.1.04.2																	
Waste Treatm	pent Center																
6142100024	Do Design & Safety WTC Phase 2 YR4	260	03APR06	30MAR07					Design	& Safety WTC I	hase 2	YR4					
6142100034	Do Procure WTC Phase 2 YR4		03APR06	30MAR07					-	e WTC Phase 2							
6142100044	Do Construct WTC Phase 2 YR4		03APR06	30MAR07					Constr	uct WTC Phase	2 YR4						
6142100064	Do Commission WTC Phase 2 YR4		03APR06	30MAR07				Do C	Commi	ssion WTC Pha	se 2 YF	4					
6142100066	AECL Contribution to WTC RUSTOUT Project		03APR06*						L Con	tribution to WT		OUT Projec	t				
6142100067	Operate Contrib to WTC Phase 2 Upgrades Facility	5,214	02APR07	25MAR27													
6.1.04.3		-															
WMA A South	n Swamp Pump & Treat																
6143100010	Build WMA SS G/W Treat Facility	918*	03APR06	07OCT09											Build WMA S	S G/W Trea	at Facility
6143100020	Start WMA SS G/W Treat	1	03APR06*	03APR06	Sta	rt WM	A SS G/W Tr	reat									
6143100030	Confirm WMA SS G/W Treat Concept & Estimates	131	04APR06	03OCT06			Confirm V	VMA S	S G/W	/ Treat Concept	& Estin	nates					
6143100050	Procure & Construct WMA SS G/W Treat Facility	524	04OCT06	06OCT08									Const	truct V	VMA SS G/W	Freat Facili	ty
6143100060	Train Operators & Commission WMA SS G/W Treat	262	07OCT08	07OCT09	Tr	ain Op	perators & C	ommi	ssion	WMA SS G/W T	reat Fa						
6143100070	Operate/Maintain WMA SS G/W Treat Facility	13,100	08OCT09	24DEC59						Operate/Mainta	in WMA	SS G/W T	reat Fac	cility 🦄			
6.1.05.1																	
	rator & Solid Waste Cementation	0 400*	0040007	1000710													
6151000010	Build Incinerator Facility	,	02APR07	12OCT16	-			Stor	t Incin	erator Proiect							
6151000020 6151000030	Start Incinerator Project Develop Incinerator Concept & CEA Process		02APR07 01APR08		Deve	alon In	cinerator Co		-								
	Develop incinerator Concept & CEA Process	700	UTAPRUO	USAPRII	Dere	.10p 111		meep			_						
6.1.05.2																	
Tile Hole Rem	rediation Processing Fac Phase 1																
6152000010	Build THR Facility	1,826*	02APR03	31MAR10											В	uild THR F	acility
6152000030	Develop THR Concept & Do Safety Analysis		03APR03	31MAR11													De
6152000040	Do THR Phase 1 Facility Design & License		02APR04	31MAR11													Do
6152000050	Procurement for THR Ph1 Facility	-	03APR06	31MAR10											P	rocuremen	t for THR Ph1
6152000057	Construct THR Ph1 Facility		03APR06*														Co
Start Date	0140002	anta Da	MAST	1				·	Sheet 25	of 27	-		+				
Finish Date	20DEC69	arly Bar rogress Bar		Document	3600-	01620	0-067-003 R			Date			Revision	1		Checked	Approved
Data Date Run Date	UZAPRUS	ritical Activity			lear	Imple	mentation P	lan									
								all									
				Cla	ssic S	Sched	ule Layout										
© Primave	era Systems, Inc.																

Activity	Activity	Orig	Early	Early	
ID	Description	Dur	Start	Finish	06 <u>2007 2008 2009 2010</u>
3152000059	Start Procure & Constr THR Ph1 Long Rod Fuels		03APR06*		rocure & Constr THR Ph1 Long Rod Fuels
152000091	THRPF1 (FPS) Project Costs FY 2006/07		03APR06	30MAR07	THRPF1 (FPS) Project Costs FY 2006/07
152000060	Train Operators & Cold Commission THR Facility		02APR07	31MAR10	Train Operators &
152000069	Start Commission THR Ph1 Long Rod Fuels		02APR07*		Start Commission THR Ph1 Long Rod Fuels
6152000092	THRPF1 (FPS) Project Costs FY 2007/08		02APR07	31MAR08	THRPF1 (FPS) Project Costs FY 2007/08
3152000093	THRPF1 (FPS) Project Costs FY2008/09	261	01APR08	31MAR09	THRPF1 (FPS) Project Costs FY2008/09
6152000094	THRPF1 (FPS) Project Costs FY 2009/10	261	01APR09	31MAR10	THRPF1 (FP\$) Project Costs FY 2009/10
6152000080	Assume THR Facility Maintenance & Fixed Costs	12,500	01APR10	27FEB58	Assume THR Facility Maintenance & Fixed Costs
6152000095	THRPF1 (FPS) Project Costs FY 2010/11	261	01APR10	31MAR11	THRPF1 (FP\$) Project Costs FY 2010/11
1.05.3					
Cemented Mo	099 Waste Conditioning Facility				
6153000900	Build Mo99 Waste Conditioning Facility	3,400*	01APR05	12APR18	
6153000922	Develop prelim Mo99 Waste Conditioning	443	20JUL06	31MAR08	Develop prelim Mo99 Waste Conditioning Technolgy
6153000924	Complete Mo99 Waste Conditioning Technology	783	01APR08	31MAR11	
6153001000	Do Mo99 Waste Conditioning Facility Engineering	786	01APR10	04APR13	Do Mo99 Waste Conditioning Facility Engineering
6153001010	Do Engineering M099 Waste Conditioning YR1	262	01APR10	01APR11	Do Engineering M099 Waste Conditioning YR1
6153001040	Start Engineering Mo99 Waste Conditioning Fac	0	01APR10		Start Engineering Mo99 Waste Conditioning Fac
6153001190	Mo99 Waste Conditioning Fac Project Mgt & Lic	2,096	01APR10	12APR18	Mo99 Waste Conditioning Fac Project Mgt & Lic
6153001200	Do PM & License Mo99 Waste Conditioning YR1	262	01APR10	01APR11	Do PM & License Mo99 Waste Conditioning YR1
6153001280	Start PM & License Mo99 Waste Conditioning Fac	0	01APR10		Start PM & License Mo99 Waste Conditioning Fac
.1.06.1			·		
CRL New Inad	ctive Landfill				
6161000010	Build Inactive Landfill Facility	1,828*	02APR07	02APR14	
6161000020	Start Inactive Landfill	0	02APR07*		Start Inactive Landfill
6161000030	Complete Inactive Landfill Concept & Siting	524	02APR07	02APR09	Complete Inactive Landfill Concept & Siti
6161000040	Design & Obtain License Inactive Landfill	700	03APR09	08DEC11	Design & Obtain License Inactive Landfill
.1.06.2		· 			
IRUS - Intrusi	on Resistant Underground Structure				
6162000010	Build IRUS 1 Facility (Vault & Cap)	1,102*	30SEP08	19DEC12	Build IRUS 1 Facility (Vault & Cap)
6162000020	Start IRUS 1	0	30SEP08		Start IRUS 1
6162000025	Revise IRUS SA & Complete CEA Process	535	30SEP08	18OCT10	Revise IRUS SA & Complete CEA Process
6162000030	Provide IRUS PM & Technical Support	730	19OCT10	05AUG13	Provide IRUS PM & Technical Support
6162000040	Design & License IRUS Facility & Provide Support	730	19OCT10	05AUG13	Design & License IRUS Facility & Provide Support
6162000050	Procure & Construct IRUS Facility Vault	305	19OCT10	19DEC11	Procure & Construct IRUS Facility Vault
	Procure & Install Bitumen Overcoating Equipment		19OCT10	190CT11	Procure & Install Bitumen Overcoating Equipment

Start Date	01APR03	Early Bar	MAST Sheet 26 of 2	7			
Finish Date	20DEC69		Document 3600-01620-067-003 Rev. R0	Date	Revision	Checked	Approved
Data Date	02APR03						
Run Date	09MAR06 11:56	Critical Activity	CRL 5 Year Implementation Plan				
			Classic Schedule Layout				
			Classic Collectuic Layour				
© Primaver	ra Systems, Inc.						

A	A - Coste	Orig	Franks	Factor														_
Activity ID	Activity Description	Orig Dur	Early Start	Early Finish											2010		2011	
6.1.06.3	Description	Dui	Otart	THISH	2006	2007			20	08		20	009		20	)10	20	<u>11</u>
0.1.00.3																		
CPL Coologics	al Disposal Facility																	
	Compile, analyze existing CGDF related data	521	01APR05*	30MAR07		Compile,	analyz	e exist	tina C	GDF	related	l data						
	Build CGDF Facility		02APR07	040CT21	Build CGDF Facil						onato							
	Start CGDF Project		02APR07	0100121		Start CGD	)F Pro	iect										
	Perform CGDF Program Management		02APR07	06OCT21		Otart OCE		Jeor										
	Perform CGDF Pre-Siting- Develop Disposal		02APR07	05APR10	-										Por	orm CG	DF Pre-S	iting
									Porfo	rm C	GDE S	iting,Safety	v Case	8 L ic			DI FIE-3	ining-
	Perform CGDF Siting,Safety Case & License	1,500	06APR10	U4JAN 16					i eno			iting,oaretj	y Case					
6.1.07																		
Lisbility Otrata	na Padalla Canaditation																	
	gy Public Consultation	4 0 4 0 *		04144.040												amont	AECL Con	
	Implement AECL Communications Framework	1,043"	U3APR06	31MAR10												ement /		imun
6.1.07.2																		
	port To Enabling Facilities Projects																	
	Provide WM Ops Support to Phase 1 Enabling Proj	1,1/4	02OCT06	31MAR11														Pro
7.1.1																		
	am Management & Support											_						
	Perform LMU Program Management Yr 2		03APR06	30MAR07		Perform L	MU Pi	rogram	n Man	agem	ent Yr	2						
7110000030	LMU Program Management balance of Yrs	16,350	02APR07	29NOV69														
7.1.2																		
	ning Information Management																	
	Provide Liability Information Management Yrs1-4		02APR03	30MAR07		Provide L	iability	/ Infor	natio	n Man	agem	ent Yrs1-4						
7120000020	Provide LIM services Yrs 5-8	1,044	02APR07	31MAR11													· · · · · · · · · · · · · · · · · · ·	Pro
																		ľ
Start Date	01APR03	Early Bar	MAST			Sheet 2	7 of 27											
Finish Date	20DEC69	Progress Bar		Document 3	3600-01620-067-00	3 Rev. R0		Date	e			Revisi	on		(	hecked	Approv	ed
Data Date Run Date	UZAPRUS	Critical Activity	<i>,</i>		'ear Implementatio													
				URL 3 I														
				Cla	ssic Schedule Layo	out												
© Primave	era Systems, Inc.																	
© i ninave			1														1	