

U.S Department of Energy Recovery Plan

Introduction

This plan documents actions and associated schedules that the U.S. Department of Energy (DOE) proposes to implement to assure compliance with the requirements of the Hanford Federal Facility Agreement and Consent Order (HFFACO, commonly known as the Tri-Party Agreement or TPA). This plan includes the date by which DOE proposes to initiate construction of its Waste Treatment and Immobilization Plant (WTP) (See TPA Milestone M-62-06). This plan also includes DOE's proposal for establishing the two required construction progress milestones described in TPA Milestone M-62-07, identified in the plan as M-62-07A and M-62-07B. The plan demonstrates that by implementing a close-coupling system, described below, TPA Milestone M-62-09, the 2007 deadline for beginning waste treatment at the vitrification complex, will be met.

Based on DOE's evaluation of the River Protection Project Integrated Baseline in addition to addressing the Milestones M-62-06, M-62-07 and M-62-08, changes to other M-62 milestones as well as specific M-90, and M-20 milestones are also proposed. These milestone changes are proposed in order to align the TPA and the RPP Integrated Baseline. A summary of work scope associated with the milestones are identified in this plan.

As discussed in this Recovery Plan, in some cases, depending on the amount of information required by the milestone, between 30 and 60 days has been added to contractor completion dates to arrive at proposed TPA milestone dates; this has been done to allow DOE time to evaluate the information submitted by the contractor, confirm completion of the milestone and submit the appropriate documentation to Ecology to support achieving the milestones. In the case of M-62-10 the baseline shows an acceleration of the completion of hot commissioning to May 2010. The Bechtel National, Inc. (BNI) contract requirement date is January 2011. Due to the complexity associated with this portion of the project and the ten years before it occurs, the TPA milestone reflects the BNI contract date and not the accelerated effort.

Background

In 1994 the Department of Energy (DOE) decided to pursue privatization for Hanford tank waste treatment and immobilization services. The strategy was to award two competitive demonstration scale contracts for processing an initial amount of waste followed by one contract for the balance of the mission in a larger facility. As this effort progressed it was determined that the cost of remotely operated facilities for mixed high-level radioactive waste would cost much more than initially thought and that it was more cost effective to build these plants for a longer operating period rather than abandoning them after the demonstration phase. The approach evolved to building one initial Waste Treatment and Immobilization Plant (WTP) rather than two and to design it for a 40 year operating life. A single contract was awarded to BNFL Inc. (BNFL) to proceed with the WTP design and to provide a price for their privatized waste treatment and immobilization services. In May 2000 their contract was terminated because the price

was too high and because of other technical performance concerns. DOE then decided to acquire the WTP with a cost-plus-incentive fee contract.

DOE awarded the WTP contract in December 2000, to BNI. In the interim period between terminating the BNFL contract and award of the BNI contract, a transition contract was implemented with the existing Tank Farm Operations Contractor, CH2M HILL Hanford Group (CHG). This was done in order to maintain momentum in the WTP effort and to provide for a smoother transition to the WTP Contractor. These efforts though successful in some areas, could not alleviate the seven-month loss of design time and could not prevent a delay in the start of construction. The current BNI schedule indicates start of construction in November 2002 compared with the original BNFL date of July 2001. However, the delay in start of construction does not impact the current TPA milestone date for the commencement of hot commissioning, which remains December 31, 2007. The date for completion of hot commissioning will be delayed, however. The contractual date for completion of this activity is January 31, 2011. BNI has accelerated this milestone in their baseline to May 2010; however, due to the complexity of hot commissioning all portions of the WTP and the 10-year time-frame, we are proposing the contractual date as the completion date for M-62-10.

Recovery

The activities and plans reflect what DOE currently has in place to be assured that HFFACO requirements, specifically addressed here, can be met with respect to the Phase I Waste Treatment Complex, captured in the RPP baseline. This baseline is consistent with the contractual milestone due dates specified in the WTP contract. The fundamental action that is being taken to maintain the December 2007 deadline for the Start of Hot Commissioning while delaying the start of construction from July 2001 to December 2002 is to close couple design and construction activities by incorporating an appropriate level of parallel (as opposed to sequential) design and construction in the WTP portion of the RPP project schedule.

The WTP Conceptual Design was formulated when DOE was in process of pursuing a privatization approach for treating Hanford's tank waste. BNFL's schedule was based on proceeding with design, construction, and commissioning in a series fashion typical for most construction projects. Activities to be serially executed were the following; design development, safety documentation development, procurements, construction, acceptance testing, and commissioning.

When DOE cancelled the privatization approach, DOE was constrained to adopt its typical assets acquisition approach governed by DOE Orders. In transition from the one approach to the other significant time was lost on the front end of the project. However, the TPA date for start of hot commissioning did not change. Since time was lost on the project's front end, a modified execution strategy was required to recover schedule delays. That strategy is referred to as 'close-coupling'.

Close-coupling allows the typical phased project approach to be broken up into parts such that portions of the project can proceed faster than the traditional process, at least on the front end of project development. In other words, design for the entire project does not need to be completed before safety documentation, procurements and construction can be executed for portions of the work. As engineering and design is fully completed on one part or portion, construction can be executed on that portion. Ultimately, what occurs in this process is a parallel execution of each of the project phases in which the activities making up each phase are executed concurrently with activities in the other phases. This approach results in faster over-all execution, but requires a substantial increase in management attention and planning, and adds some risk.

Because DOE is allowing BNI to pursue a close-coupled approach, limited construction authorization has already been granted for non-safety related work. Additional preliminary construction will also be granted in the near future. This allows BNI to commence initial construction work before all the plant design is completed to ensure schedule recovery.

Adequate detailed reflection of the baseline is depicted in the River Protection Project (RPP) Milestone Sequence Chart (MSC) and the RPP Expanded Management Summary Schedule Charts provided in Appendix 2. These charts will be referred to in the discussion section of this plan. The schedule sheets submitted reflect the contractor's current baseline as approved by DOE on July 2, 2001.

Changes to the baseline are made consistent with approved contract change procedures and will be reflected in the contractor's subsequent annual baseline submittal, the next occurring in April 2002. Ecology's participation in project reviews and receipt of the contractor's status report, which includes a change (trend) log, are meant to keep the agency fully informed of impending changes. Ongoing design evolution, such as the reconfiguration of the Pretreatment and LAW Pretreatment Facilities, will be reflected in the contractor's annual submittal. It should be noted that although the facilities have been combined the basic functions (processes) have been retained. This modification, the evolution of a separate laboratory facility and ongoing optimization studies that may impact final facility configuration are examples of design evolution for the Waste Treatment complex. These changes are reflected in periodic ORP status reports and will be included in the annual baseline update as appropriate. This recovery plan addresses only the Phase I scope of the Bechtel National Inc, contract. It does not address issues associated with Phase II activities¹. Consequently the plan does not address the following TPA milestones;

- M-45-05 Retrieve waste from all SST by September 30, 2018
- M-45-00 Complete closure of all SST farms by September 30, 2024
- M-62-00 Complete pre-treatment processing and vitrification of HLW and LAW tank waste by December 31, 2028

¹ Phase I scope requires the processing of no less than 10% of Hanford's tank waste by mass and 25% by activity. Phase II scope encompasses processing of remaining waste.

- M-92-05 Inclusion of Hanford Cs/Sr treatment and/or repackaging in Phase II request for proposal by June 30, 2003.

The RPP Milestone Sequence Chart (MSC) identifies RPP major milestones that encompass the work required to meet the Phase I Office of River Protection (ORP) mission which is to: “Build and Operate the Waste Treatment Complex to Complete the Cleanup of Hanford’s Highly Radioactive Tank Waste”. The key activities and milestones identified on the MSC are planned, integrated, and scheduled on the RPP Expanded Management Summary Schedule (EMSS). There are four sheets to the EMSS that will be referred to. Letter designations (in bold black) are associated with RPP major milestones and activities (yellow).

Discussion

The following MSC “Callout” descriptive text is included here as documentation of principal activities necessary for successful plan implementation. Corresponding TPA milestones are also described.

Callout A, sheets 3 & 4

Related TPA Milestone: **M-62-06**, Start of Construction Phase 1 Treatment Complex

Proposed TPA date of completion: **12/31/02**

Major Performer: WTP Contractor (BNI)

This TPA Milestone is associated with RPP major contract milestone #13, WTP Start of Construction (BNI-M1). Key tasks that must be accomplished in order to meet this milestone that are shown in black on the MSC represent work or activities already accomplished and those shown in color represent work yet to be done. Major milestones, key milestones, and other necessary work or activities required to meet this major milestone are represented and appropriately scheduled on the EMSS, sheets 3 and 4.

Start of construction of the Waste Treatment Plant (WTP) was originally scheduled for July 31, 2001 when the Privatization planning was underway with BNFL as the performing contractor. As a result of excessive costs, Privatization was replaced with a new close-coupled approach utilizing BNI as the performing contractor. This change resulted in moving the start of construction date to December 31, 2002.

As is apparent from the MSC and the EMSS, DOE must ensure necessary permits are in place, appropriate safety documentation and requirements are established, and necessary utilities are provided before a Construction Authorization (CA) can be issued. These elements had to be accelerated significantly in order to support this Start of Construction date, which will be a challenge for all parties involved to meet.

BNI has accelerated their schedule to commence first structural concrete pours on the Pretreatment (PT) facility, as well as on the LAW facility, and the HLW facility. This assumes that all issues on the critical path can be resolved in a rapid and timely fashion.

Callout B, sheet 3

Related TPA Milestone: **M-62-07A**, Initial Erection of Structural Steel in the Low Activity Waste Facility above Elevation Plus 3.

THIS MILESTONE REPRESENTS THE PLACEMENT OF THE FIRST STRUCTURAL STEEL COLUMN AS PART OF INITIATION OF BNI BASELINE SCHEDULE ACTIVITY 4DL131B000 –*LAW – ELEV –21 SS COLUMNS, BEAMS & Q-DECK AT +3* (CONTRACT NO. DE-AC27-01RV14136). IN ADDITION ACTIVITY 4DL121B100 *LAW – ELEV –21 PLACE BASEMAT CONCRETE* SHALL BE SUBSTANTIALLY COMPLETED AND ACTIVITIES 4DL121D000 *LAW – ELEV –21 PERIMETER WALLS FREP* AND 4DL121F000 *LAW – ELEV –21 INTERIOR WALLS FREP* SHALL HAVE BEEN INITIATED.

COMPLETION OF THIS MILESTONE WILL BE MET WHEN THE FIRST STRUCTURAL STEEL COLUMN IS INSTALLED AT THE –21FOOT ELEVATION IN THE LAW FACILITY. THIS MILESTONE DEMONSTRATES A SIGNIFICANT PROGRESS IN DESIGN AND ENGINEERING AS WELL AS CONSTRUCTION OF THE LAW FACILITY BECAUSE BASEMAT CONCRETE WILL HAVE BEEN POURED AND CONSTRUCTION OF WALLS WILL HAVE BEEN STARTED. IN ADDITION, PROCUREMENTS WILL HAVE BEEN MADE, NOT ONLY FOR THIS FACILITY, BUT FOR THE OTHER MAJOR FACILITIES. ERECTION OF STRUCTURAL STEEL IN THE LAW FACILITY WILL ALSO PROVIDE A LESSONS LEARNED OPPORTUNITY BECAUSE IT WILL BE THE FIRST FACILITY TO BEGIN THIS ASPECT OF CONSTRUCTION.

Proposed TPA date of completion: **10/30/03**

Major Performer: WTP Contractor (BNI)

This is a proposed intermediate construction Milestone to meet TPA Milestone M-62-07, Construction Progress Milestones (2) – Phase I Treatment Complex. This Milestone demonstrates that significant design and procurement has been accomplished such that above ground construction can get underway with installation of structural steel in the LAW facility.

As shown on sheet #3 of the EMSS, this Milestone is planned and scheduled in the BNI baseline construction work and is forecasted to be complete in advance of the TPA milestone date.

Callout C, sheet 3

Related TPA Milestone: **M-62-07B**, Low Activity Melter #1 Staged and Ready for Refractory

THIS MILESTONE REPRESENTS THE ASSEMBLY OF LAW MELTER #1 TO THE POINT IT IS READY FOR REFRACTORY AS PART OF BNI BASELINE ACTIVITIES 3EL3212A00 *SPECIFICATIONS AND ANALYSIS*, 4DL321A000 *LAW – PROCURE MATERIAL & EQUIPMENT FOR MELTERS* AND 4DL321A200 *LAW- ASSEMBLE MELTER #1* (CONTRACT NO. DE-AC27-01RV14136). IN ADDITION, ACTIVITIES 4DL121U100 *LAW – ELEV +3 SOUTH MELTER FREP* AND 4DL131D000

LAW – ELEV +28 COLUMNS, BEAMS & Q-DECKING AT +48 SHALL BE SUBSTANTIALLY COMPLETED.

COMPLETION OF THIS MILESTONE WILL BE MET WHEN LAW MELTER #1 WILL HAVE BEEN FULLY FABRICATED, ASSEMBLED AND READY FOR REFRACTORY MATERIAL TO BE INSTALLED. ASSEMBLY OF THE MELTER IS SCHEDULED TO OCCUR NEAR THE END OF LAW CONSTRUCTION WHEN THE FACILITY IS MOST READY TO HAVE THE ASSEMBLED MELTER MOVED INTO THE LAW CELL WHERE THE REFRACTORY MATERIAL WILL BE INSTALLED. MEETING THIS MILESTONE THEREFORE REPRESENTS SIGNIFICANT ACCOMPLISHMENT OF THE ENGINEERING, DESIGN AND CONSTRUCTION OF THE LAW FACILITY. FURTHERMORE, ASSEMBLY OF THE FIRST MELTER PROVIDES SIGNIFICANT OPPORTUNITY FOR LESSONS LEARNED THAT CAN BE APPLIED IN THE ASSEMBLY OF THE OTHER TWO LAW MELTERS AS WELL AS THE HLW MELTER.

Proposed TPA date of completion: **11/30/05**

Major Performer: WTP Contractor (BNI)

This is a proposed intermediate construction milestone to meet the requirements of existing TPA Milestone M-62-07, Construction Progress Milestones (2) – Phase I Treatment Complex. This Milestone demonstrates significant design, procurement, and fabrication has been accomplished such that main plant components can be made ready to install in the LAW facility. Refractory brick will not be installed at the point of construction since the brick must be installed just prior to melter heat-up.

As shown on sheet #3 of the EMSS, this Milestone is planned and scheduled in the BNI baseline construction work and is forecasted to be complete in advance of the TPA milestone date.

Callout D, sheets 1 & 2

Related TPA Milestone: **M-47-05A**, Complete Startup and Turnover for Waste Retrieval and Mobilization System for Initial LAW Feed Tank

TPA date of completion: **4/30/06** (No change in current TPA date.)

Related TPA Milestone: **M-47-03A**, Complete Startup and Turnover for Waste Retrieval and Mobilization System for Initial HLW Feed Tank

Proposed TPA date of completion: **2/28/07** (No change in current TPA date.)

Major Performer: Tank Farm Contractor (CHG)

These TPA Milestones have not changed. They are associated with RPP major milestone #15, Complete First AP-101 and AZ-101 Waste Transfers. As shown in the MSC, there are 26 key milestones that must be accomplished in order to meet major milestone #15. These are identified and scheduled with the necessary support activities on sheets 1 and 2 of the EMSS. Four of the key milestones have been completed and are shown in black on the MSC.

Callout E, sheet 3

Related TPA Milestone: **M-62-09**, Start Hot Commissioning – Phase I Treatment Complex

TPA date of completion: **12/31/07** (no change in current TPA date)

Major Performer: WTP Contractor (BNI)

This TPA Milestone is associated with RPP major milestone, #17, Pretreatment, Complete Integrated Hot Commissioning. Accomplishing the work connected with this milestone is essential to a successful performance of the BNI contract. Large contract incentives are in place for BNI to meet the TPA date for start of hot commissioning by December 2007. BNI is contracted with incentives to start cold commissioning by February 2007.

As shown on the MSC, there are numerous activities that must be accomplished in order to complete major milestone #17. These have been planned, integrated, and scheduled as shown in sheet 3 of the EMSS. **It should be noted that start of hot commissioning by December 2007 is not in jeopardy of being missed.** All necessary work to accomplish the milestone has been identified and planned for.

Callout F, sheet 2

Related TPA Milestone: **M-90-08**, Initiate ILAW Disposal Facility Construction

Proposed TPA date of completion: **2/28/05**

Related TPA Milestone: **M-90-09-T01**, Complete ILAW disposal Facility Detailed Design

Proposed TPA date of completion: **5/30/03**

Related Milestone: **M-90-10** Initiate Placement of ILAW Waste Canisters in ILAW Disposal Facility (Low Activity Waste Packages Placed Within These Facilities will be Retrievable)

Proposed TPA date of completion: **8/31/08**

Major Performer: Tank Farm Contractor (CHG)

These TPA Milestones are associated with RPP major milestone #19, ILAW Disposal Capability Available. The key activities to ensure this milestone is completed are identified on the MSC and planned and scheduled on sheet 2 of the EMSS. Most of the activities are associated with developing project W-520. M-90-08 is based on DOE submitting the RCRA Part B permit application having 80% design on critical systems

for the ILAW. Critical systems are defined for this activity as the liner, leachate collection system, and leak detection system. DOE understands that Ecology requires two years to process DOE's Part B application to permit the ILAW facility as a final status unit. Completing all the work associated with major milestone #19 by 6/30/08 also completes the TPA Milestone. LAW hot commissioning will be in the preparation stage and will not have yet commenced to produce glass when ILAW disposal capability becomes available.

Callout G, sheet 3

This callout highlights completion of hot commissioning of the LAW and HLW facilities. These activities are an essential part of the hot commissioning work scope.

Major Performer: WTP Contractor (BNI)

Callout G is connected with RPP major milestones #21, LAW - Complete Integrated Hot Commissioning, and #25 HLW – Complete Integrated Hot Commissioning. All the activities required to accomplish these milestones are planned and scheduled on sheet 3 of the EMSS.

Callout H, sheet 2

Related TPA milestone: **M-90-11**, Complete Canister Storage Facility Construction (W-464)

Proposed TPA date of completion: **6/30/09**

Major Performer: Tank Farm Contractor (CHG)

This Milestone is associated with RPP major milestone #23, HLW Storage Capability Available. The key activities to ensure this milestone gets complete are identified on the MSC and planned and scheduled on sheet 3 of the EMSS. M-90-11 is based on DOE submitting the RCRA Part B permit application having 80% design on critical systems for the CSB. Critical systems are defined for this activity as the canister storage tube system. DOE understands that Ecology will require two years to process DOE's Part B application to permit the HLW facility as a final status unit. Most of the activities are associated with completing project W-464, upgrades to the canister storage facility and turnover for hot operations. HLW hot commissioning is scheduled to commence prior to when HLW disposal capability becomes available. However, according to the detailed baseline schedule the HLW facility will have produced only about 22 canisters by the time the disposal facility is operational. The HLW plant itself will be designed with lag storage capability of 45 canisters.

Callout I, sheets 3 & 4

Related TPA Milestone: **M-62-10**, Completion of Hot Commissioning

Proposed TPA date of completion: **1/31/11**

Major Performer: WTP Contractor (BNI)

Callout I is associated with RPP major milestone #25, HLW - Complete Integrated Hot Commissioning. Activities required to accomplish this milestone are planned and scheduled on sheet 3 of the EMSS. This RPP major milestone is also related to the M-62-10 Milestone and reflects activities related to HLW Complete Integrated Hot Commissioning.

Completion of this TPA Milestone is dependent on Pre-treatment hot commissioning and key activities are reflected in RPP Major Milestone #17 (Callout E, Sheet 3) Pretreatment – Complete Integrated Hot Commissioning. Key activities related to the Low Activity Waste hot commissioning portion are reflected in RPP Major Milestone #21 (Callout G, sheet 3) LAW Complete Integrated Hot Commissioning. All activities required to complete this milestone are scheduled on sheet 3 of the EMSS. RPP Major Milestone #25 (Callout I, sheet 4) HLW – Complete Integrated Hot Commissioning is also related to the M-62-10. The completion of Pre-Treatment, Low Activity and High Level Waste Hot Commissioning encompass the M-62-10 Milestone. BNI shows on their baseline an acceleration of completion of hot commissioning to May 2010. The BNI contract date is January 2011. Due to the complexity associated with this portion of the project and the nine years before it occurs, the TPA milestone reflects the BNI contract date and not the accelerated effort.

Item L, sheet 2

Related TPA Milestone: **M-62-11** Submittal of Hanford Tank Waste Treatment Phase II Plan

Proposed TPA date of completion: **1/31/2014**

Major Performer: Future contractor

These TPA Milestones are associated with the RPP major milestone #87, Complete Vitrification of Hanford High Level Tank Waste and reflect the current TPA date of 6/30/03 but have not been aligned with the RPP baseline. These milestones were tied to the original vitrification plant schedule and appear to have not been aligned with changes in the schedule. Also, it should be noted that DOE-ORP and DOE-RL are addressing integration issues with respect to Cs/Sr storage.

Budget and Cost

Appendix 6 provides budget and cost status information for the RPP, for both the WTP contract with BNI and the Tank Farm Contract (TFC) with CHG. The figures provided in this attachment address the contractors' planned expenditures (Budgeted Cost of Work Scheduled or BCWS) as well as DOE's budget requirements (accounting for carryover). The BCWS and budget requirements are shown both annually and cumulatively.

As referenced in the attached pages from the President's approved FY 2002 budget - Energy and Water Appropriation Conference Report, the Office of River Protection was appropriated \$1,035,468K (this includes the \$2,000k from line item 01-D-414 Preliminary project, engineering and design (PE&D) for the activities associated with design of the Immobilized High Level Waste Storage Facility).

Jesse Roberson, EM-1, subsequently sent Harry Boston, Manager, ORP, a letter (attached) that indicated ORP's total available funds for FY 2002 is \$1,027,198K. That letter reflects Ms. Roberson's decisions regarding the allocation of the congressionally mandated general reduction to the Environmental Management program.

The Office of Management and Budget has decided to apportion the funds to the Department of Energy from the FY 2002 Energy and Water Appropriation quarterly by the following percentages: 1st quarter - 31.66%, 2nd quarter - 28.50%, 3rd quarter - 24.19%, 4th quarter - 15.65%. As a result, ORP will be receiving the FY 2002 funds by those percentages. Due to the carryover funds from FY 2001 and the receipt of 60.16% of the funds by January 2002, the apportionment of funds will not impact ORP's ability to meet the Recovery Plan schedule. Consequently, and as required by Ecology's July 26, 2001 tank waste Final Determination, "USDOE has in place FY2002 funds and the necessary spending authority from the Bush administration to fully support implementing the recovery plan."

Change Control Forms

Attachment 3 provides the Federal Facility Agreement and Consent Order Change Control Forms that reflect the tentative agreement (prior to public comment) reached between DOE and Ecology, since the first recovery plan was submitted by DOE on October 1, 2001. The rationale for and impacts of these changes are identified as well as any affected documents. Changes are proposed for specific M-62, M-20 and M-90 series milestones.

High-Level Bases and Assumptions

Appendix 1 provides the high-level bases and assumptions for the WTP project baseline. These bases and assumptions are based on several factors. Part were developed by BNI as part of the modified WTP Project Baseline that was submitted to DOE on June 29, 2001 and approved by ORP on July 3, 2001. These (bases and assumptions) have been modified to reflect changes as project issues matured. Many reflect DOE's responsibilities under the WTP contract, which are not within BNI's control.

Ecology requested some clarifications to the following assumptions. They are provided below;

Regarding assumption #1: **“The scope basis for the baseline in defined and underpinned by the technical submittal in April 2000.”** Comment: This statement does not define what submittal is being cited. Consequently, Ecology has no ability to adequately review or comment.

Response: The technical submittal referred is comprised of the BNI deliverables provided to DOE in April 2000 which defined and supported the scope, cost and schedule baseline for the WTP. Those deliverables were the Project Execution Plan, (PEP, Contract Deliverable 1.2), the Project Control System Description, (PCSD, Contract Deliverable 1.3) and the WTP Project Baseline (Contract Deliverable 1.5). In addition to these deliverables, BNI also provided the Project Control Plan (PCP), as a companion document to the PCSD. The PEP, PCSD and PCP collectively define how the WTP baseline was developed and is to be maintained and managed. This assumption has been removed from DOE’s proposed recovery plan.

Regarding assumption #11: **“Failed melter/spare melter handling and/or disposal costs, as well as associated schedule impacts, are not included in the scope of this baseline.”** Comment: This assumption/basis needs additional justification. Why should reasonable assumptions regarding melter failure not be included?

Response: The highlighted statement above is not an assumption; it is a statement of fact. But the reason for this statement is due to the assumption: **“Melters will meet or exceed their four-year design life and will not fail during the project.”** Given this assumption, there is no point in adding associated handling or disposal costs for things that will not happen in the life of the project. The operational life of the melters during the BNI Contract period extends from start of cold commissioning to completion of hot commissioning. Forecasted dates for this period are 2/07 to 5/10, about 3.25 years and well under the four year design life. The four year design life is also consistent with the mechanical basis of design which stipulates “The high level waste (HLW) and low activity waste (LAW) melters will be specified for nominal design life consistent with typical joule-heated melter performance and considering the nature of the feed.” (Ref. 24590-WTP-DB-ENG-01-001, Rev A; Basis of Design, Section 11.1.1) At this point in the project evolution, there is no data that suggests a high probability of melter failure during the BNI Contract period and therefore no allowance for this occurrence is made in the baseline. However, if at some later time there is sufficient reason to make allowance in the baseline for failed melter handling, then the baseline change process will be executed accordingly.