AMWTP Work Activity Descriptions (October FY13 – July FY14)

1 Production Planning

The Integrated Production Planning team and the Administrative Support addressed in this work package establishes and communicates the vision and strategies for the AMWTP work execution priorities for strategic planning; the development and oversight of work scope, schedule, and budget; the technical oversight of activities and personnel; and the resolution of complex technical issues.

Additional scope of work for the Container Moves team is maintaining a thorough understanding of policies and procedures governing Operations and Data Validation activities to plan and schedule within those policies and procedures; perform research, gather data, analyze, prepare reports and recommend changes for new and existing processes and tasks; support Operations crews in the execution of production plans with regard to storage, feedstock and process throughput; make decisions and recommendations within policy guidelines; exercise initiative in adapting and applying procedures to address unusual situations; and monitor the storage and staging of waste containers to ensure compliance with procedures and plans.

2 Box Retrieval Operations

The scope of box retrieval operations for AMWTP is to retrieve stored waste (boxes and bins) from the earthen covered berms located in the RCE of the Transuranic Storage Area-Retrieval Enclosure (TSA-RE). A portion of these containers are breached, damaged, degraded, or of questionable structural integrity. AMWTP will take appropriate measures to manage these containers safely and effectively to minimize the spread of radioactive contamination and hazardous materials, and exposure to workers. The scope includes labor and nonlabor elements (including personal protective equipment [PPE]) for completing this scope.

3 Drum Retrieval Operations

The scope of drum retrieval operations for AMWTP will be to retrieve stored waste drums from the earthen covered berms located in the RCE of the TSA-RE. A portion of these containers are breached, damaged, degraded, or of questionable structural integrity. AMWTP will take appropriate measures to manage these containers safely and effectively to minimize the spread of radioactive contamination and hazardous materials, and exposure to workers. The process of cargo container unloading will also be captured in this work scope for retrieved waste drums stored in the cargo containers. The scope includes labor and nonlabor elements (including PPE) for completing this scope.

4 Soil Removal Operations

AMWTP will disposition the soil cover and firebreak soil removed from the bermed waste in accordance with SSDP-01, AMWTP Soil Sampling and Disposition Plan for the Transuranic Storage Area Retrieval Enclosure. The scope includes labor and nonlabor elements (including PPE) for completing this scope.

The remaining soil between Cells 1 and 2 and the berms around the waste will be packaged as Low Level Waste (LLW) or Mixed Low Level Waste (MLLW) as applicable and all clean soil will be removed and taken to the T12 disposal site. It is assumed that all waste between Cells 1 and 2 will be packaged as MLLW.

5 Retrieval Maintenance

The scope of Retrieval Maintenance is to provide resources and support to the TSA-RE retrieval process for all process equipment electrical, mechanical, or instrumentation involved in the retrieval scope of work. The scope includes labor and nonlabor elements (including PPE) for completing this scope.

6 Characterization Management

The title of characterization encompasses many activities, and for each of those activities management is required to organize, plan, direct, and oversee that the work is done safely and compliantly. Work is performed on different shifts by various groups of personnel, starting with Bargaining Unit personnel, non-exempt, and exempt staff; along with subcontractor personnel. The initial mission of this group is to provide containers to the various characterization processes; to operate the processes: RTR, NDA, treatment tents, flammable gas sampling and analysis (FGA), headspace gas analysis (HGAS), and solids coring; to prepare the required paperwork for the various activities to meet regulating documents; and preparation through shipment of the TRU waste to the Waste Isolation Pilot Plant (WIPP).

7 Characterization Other TRU

This work package has been established for preparation and approval of required documentation to bring non-Idaho National Laboratory (INL) generated waste onsite, complete finger printing of the waste and preparation of containers for solids coring. Required documentation includes Waste Tracking System (WTS) and item description code (IDC) changes to allow shipment of containers to the generator site or to WIPP. The waste in this category is also subject to the 1995 Settlement Agreement for receipt, characterization, certification, and shipment offsite. The scope includes labor and nonlabor elements (including PPE) for completing this scope.

8 Operations RTR

All containers are moved by waste handlers per move sheets generated by the Integrated Production Planning group under control account 1000.04.00.00, which also establishes priorities for the crews. However, the waste handlers in this account only handle movements until the containers are delivered to the staging area for shipments (TRU/MLLW/LLW). In the standard characterization process (cycle), all containers are processed through RTR. There are several different RTR machines that can process different size containers, and the machines are operated by either Advanced Mixed Waste Treatment Project (AMWTP) operators or Central Characterization Project (CCP) operators. There are two levels of RTR scans that can be completed, including fast scans or certified scans. These scans are used (but are not limited) to identify prohibited items for the t treatment tents, for containers to meet the various disposal waste acceptance criteria (WAC), to identify/confirm the AK for the container, or verify treatment. Part of the operational requirements completed by the operators is the preparation of paperwork that documents the information. In most cases, this paperwork is then turned over to the next level of review depending on the process flow. WIPP certified scans are performed for debris containers and proceed to the Advanced Mixed Waste Treatment Facility (AMWTF) or direct shipping if no prohibited items are found during NDA prior to supercompaction. WIPP certified scans are performed on solids/soils drums as part of characterization. RTR may also be performed on LLW/MLLW containers as required to meet the specific treatment, storage, and disposal facility (TSDF) WAC requirements.

9 Operations NDA

Determination of the isotopic concentrations, TRU content, Fissile Gram Equivalent (FGE), and Plutonium-239 Equivalent Curies (PE-Ci) required for management of the containers at AMWTP is obtained through the NDA process. The results of the NDA process are used to determine the acceptability for processing in the AMWTF, whether the containers meet the LLW/MLLW requirements or the TRU requirements for certification, shipping, and disposal of the waste. All containers are moved by waste handlers in the standard characterization process (cycle), and all containers are processed through NDA. There are several different NDA machines that can process different size containers, and the machines are operated by either AMWTP or CCP operators. There are two levels of NDA scans that can be completed, and include fast scans or certified scans. These scans are used (but are not limited) to

ensure the assay requirements for the AMWTF are met, for containers to meet the various disposal WAC, to identify/confirm the AK for the container, or to verify treatment. Part of the operational requirements completed by the operators is the preparation of paperwork that documents the information. In most cases, this paperwork is then turned over to the next level of review, depending on the process flow. WIPP certified scans are performed for debris containers and proceed to AMWTF if no prohibited items are found during NDA prior to supercompaction. WIPP certified scans are performed on solids/soils drums as part of characterization. NDA may also be performed on LLW/MLLW containers as required to meet the specific TSDF WAC. The time required for this activity was calculated using an estimated number of planned events and the machine capabilities and the amount of time required for each event. In addition, an analysis was completed to determine the minimum number of staff needed to effectively operate the machines.

10 Drum Venting & HSG

There is a requirement for containers (primarily drums) to be vented prior to intrusive characterization activities, such as entering the AMWTF. HGAS is required for debris waste streams for disposal at WIPP. Venting is required for shipping of wastes in Transuranic Transporter Model-II (TRUPACT-II) Type B transport packages. TRUPACT-II Content (TRUCON) codes for shipping of TRU waste may also require venting and installation of a filter.

The AMWTF documented safety analysis (DSA) requires venting to eliminate an entire class of accidents or safety issues whether TRU or LLW/MLLW. Boxes do not require venting as boxes were not designed as Department of Transportation (DOT) Type A containers. Most MLLW wastes do not require venting. For these various reasons, containers must be vented.

HGAS is a requirement of WIPP Hazardous Waste Facility Permit (HWFP) as a check for hazardous constituents and is only required for TRU waste disposal. Debris waste streams require a minimum of 10 samples per lot which is performed at WMF-634. Samples are collected through a filter; the gases collected are directed to a Gas Chromatography/Mass Spectrometry (GC/MS) system for real time analysis. This activity is intermittent due to the expected sampling of 500 drums in the next 3.5 years, or at a rate of 5 containers per month (or 1 sampling event). Each sampling event is limited to 20 samples and will generate 1 Batch Data Report (BDR) per sampling event that will require HGAS data validation and verification.

The scope includes labor and nonlabor elements (including PPE) for completing these activities.

11 Solids Coring

The WIPP WAC requires a minimum of five core samples per waste stream or lot. MLLW does not require statistical coring and solids analysis; however, it may require representative sampling. Waste coring/solid sampling operations for TRU solidified or soils waste occurs in the coring glove box. This activity is intermittent due to the expected sampling of approximately 92 AMWTP legacy drums and 540 offsite waste drums. Each sampling event is limited to 20 samples and will generate 1 BDR per sampling event that will require data validation and verification.

12 TRU Validation – Level I

Data validation and verification consists of several levels of reviews. Once the BDR is generated by the operators, as discussed previously, the Independent Technical Reviews (ITR) are conducted (also known as Level I reviews). If issues are found at the operator level, then nonconformance reports (NCRs) are generated and included in the BDR. For RTR activities, this includes a complete review of the audio/visual recordings along with reviews of the submitted paperwork in the BDR. Any discrepancies or issues are resolved or sent for rework prior to promotion to the next level of validation. For NDA activities, the reviews are completed by the Expert Technical Reviewer (ETR) by review of the spectrum

data and paperwork submitted in the BDR. Similar reviews are conducted for HGAS and Coring BDRs. The supercompaction of waste in the AMWTF generates Visual Examination (VE) BDRs which also require ITR of approximately 15 per week. If any NCRs are generated at the operator level or if issues are found during the ITR/ETR review, then NCRs are generated.

13 TRU Validation – Level II

Level II validation includes reviews by the Site Project Managers (SPMs) for all BDRs that complete Level I review. To allow for certification of the containers, the SPMs also perform reconciliation evaluations. At this point the data evaluations go from a BDR with 20 containers, to individual container evaluations. For containers to be completed through a reconciliation lot, any NCRs that were previously generated are required to be closed. Similar activities and requirements are implemented for the LLW/MLLW process in preparation for disposal.

The SPMs also perform other activities for AMWTP based on data evaluation and reviews; this includes identification of waste that can be direct-feed to the AMWTF and developing virtual Six-drum Overpacks (SDOP) for waste handling to build. SDOPs are needed to allow for the AMWTF to continue generating waste for certification and disposal.

14 Recon/TRU Certification

Reconciliation of the data is completed after the BDRs are completed. The previous work was based on the machine output; for reconciliation, the data review is based on containers. These containers must have VE or RTR and NDA, in some cases HGAS and/or coring also. Information for the various containers is organized based on the container to evaluate its completeness and closure of NCRs to be included in a reconciliation lot. This information is provided to the Waste Certification Officials (WCO) for the next step of processing.

Waste certification is used to generate the input for the Waste Data System (WDS) in Carlsbad, which will allow certification of containers and payloads to be identified for shipments. Additional information is required to complete the certification activities, such as FGA and Gas Generation Testing (GGT), which are performed by CCP, and data is provided to complete certification of containers for preparation of shipments.

15 Source Term Development

Radiological characterization is part of the waste characterization process and entails determination and quantifying the radionuclide distribution for each container of waste, which may be completed for individual items, waste containers, or populations of waste. There are several methods to develop/prepare this information, generically called source term development. This information becomes part of the record for establishing that the waste meets the WAC for the disposal facility and DOT requirements for shipments. The source term data package in conjunction with the Container Data Files comprises the final container data package which will be certified by Nevada National Security Site (NNSS) WCOs (covered in a different element).

16 LLW/MLLW – TVS I and II

The LLW/MLLW generated at AMWTP will use waste characterization data generated from the existing WIPP waste certification program to meet waste stream characterization and WAC for the disposal facility. The MLLW/LLW Program uses certain information by personnel qualified as a TVS I and/or II. The TVS I can be completed at the time of RTR or VE or as a tape review of previous RTR events. There are other forms that can be generated for completion of the TVS I; completion of the form also requires

that a source term has been completed for those containers. The personnel completing these forms can include the Level I and II TRU validators, along with CCP (as a subcontractor).

17 Characterization Maintenance

The various characterization machines require maintenance including preventive maintenance (PMs), corrective maintenance (CMs), and general repairs. These machines are not new and have a multitude of moving parts and electrical circuits that require close monitoring and upkeep.

18 Acceptable Knowledge

For TRU waste, the WIPP HWFP is extremely prescriptive concerning what information constitutes AK, and how it is to be compiled, reported, evaluated, and maintained for TRU waste. Essentially, it requires an exhaustive search of all available data, including such things as when, why, how, and by whom the waste was generated. The physical form of the waste, all of its hazardous constituents, delineation of waste stream, waste matrix codes, the presence of prohibited items or conditions, and methods of treatment are all required. In addition, the determination as to defense determination is necessary for disposal at WIPP. As part of the waste stream required information, United States (US) Environmental Protection Agency (EPA) requires an understanding of specific radionuclide content and quantification as identified in the WAC. The AMWTP strategy concerning AK is to use the existing program as-is, with two significant modifications. The first modification is specific to the AK for waste yet to be retrieved from the TSA-RE. The AK summary report for the BN510 waste stream will be modified to combine the various Rocky Flats debris IDCs into a single IDC, suitable for introduction into the AMWTF. The single IDC will simplify, and therefore expedite, the retrieval process, without changing the output of the waste stream. Further, since AK indicates that the only non-Rocky Flats waste remaining to be retrieved comes from other INL generators, AMWTP will complete the AK regarding these generators in FY-15. By doing this, any containers with inadequate markings or labels can be opened, and the summary category can be identified. Debris will be routed to the AMWTF, and solids will be routed to the appropriate drum packaging system (DPS). The second modification applies to waste initially disposed within the Subsurface Disposal Area (SDA) pits, and subsequently excavated and sent for storage at AMWTP. Where adequate information exists for an individual container, AMWTP will use the existing waste assignments. Where inadequate information exists, AMWTP will apply the same method as is used by CCP for the SDA waste. Specifically, the inputs to the pits will be evaluated, EPA Hazardous Waste Numbers (HWNs) will be assigned accordingly, and the waste generated from these sources will be segregated into streams at the summary category level. AK personnel will also support Retrieval activities (control account 1000.04.01) to establish generator data and data needs for WTS to allow for efficient processing.

19 Treatment Facility General

This element includes all project management resources directly utilized in supporting the AMWTF operations. Work includes management support, baseline preparation, monthly reporting, variance analysis, waste tracking, timekeeping, personnel assessments and the overall expertise to the plant. In addition to management resources, this account also captures the required training, travel, and office equipment not captured in the other work packages.

20 Boxline Operations

This work package addresses the processing of TRU boxes in the AMWTF, including all PPE needed to perform the scope. After characterization activities, boxes are selected for feeding to the AMWTF. Boxes are fed into the Box Opening Gantry Robot (BOGR) airlock where the box top is remotely cut off. Opened boxes are then conveyed into one of the three box processing troughs – two are situated in the

North Box Line and one is in the South Box Line. Operators situated outside of the Box Lines, using remotely operated equipment in the Box Lines remove the contents from the boxes, size reduce it as necessary, sort and segregate it as necessary, and place it into compaction drums (silvers) which are situated below the waste troughs. The waste contents of each box are carefully documented by the operators, using the WIPP VE characterization process. Remote equipment used by the operators includes Brokk manipulators, guillotine, a PaR Systems manipulator, and a master-slave manipulator (MSM). Loaded silvers are then sent to supercompaction. The emptied boxes and the cut off lids are sent to a shredder, and are shredded into large metal disposal boxes known as BR-90 shredder boxes.

Included in this work package is manual processing of large and bulky items. Size reduction equipment such as plasma cutting torches, grinders, and guillotines, is utilized as necessary by operators in protective suits to size reduce large items so they can be loaded out into silvers for compaction or into BR-90 shredder boxes. The BR-90 will then be exported from AMWTF and taken to WMF-634 for assay characterization to ensure the contents are less than 100nCi/gram.

Within this element is a Recovery Action and entails revising operations to enable empty drum carcasses to remain with the empty waste box and delivered to the box shredder to be processed as LLW. This activity reduces the demand on the box lines and allows approximately 2 additional boxes to be processed per week through AMWTF. This process is currently under a Value Engineering study to identify the most effective way to perform the activity.

21 Supercompactor Operations

This work package includes the size reduction scope of Supercompactor operations. The Supercompactor is housed within a glove box containment, and is capable of processing both direct feed 55-gal drums and silvers from Box Line operations. The 55-gal drums are remotely fed into the containment by means of a venturi opening, and are fed to the Supercompactor by a drum handling robot. The Supercompactor applies up to approximately 4.5 million pounds force to each drum, and compacts the drum to what is referred to as a puck. Pucks are then moved into the puck handling glove box, and are available for selection to be placed into 100-gal product drums. Selection is by the Process Optimization System (POS), and is based on factors such as weight, height of puck and radionuclide content. The objective of POS is to maximize the filling of the 100-gal product drums. All PPE needed to perform the scope is included in this work package.

The Supercompactor has excess capacity when compared to the box lines. A Recovery Action has been initiated for concurrence to allow the Supercompaction of certain prohibited items (aerosol cans, liquids, and small sealed containers). This modification would significantly reduce the amount of drums entering the AMWTF in an SDOP and allow them to be supercompacted as direct feed.

22 Treatment Facility Maintenance

This work package includes the PM and CM that directly supports operation of the AMWTF. All PPE needed to perform the scope is included in this work package.

23 Payload Assembly

This control account has the following work packages that break down the scope of work: Payload Assembly, TRUPACT Operations, TRU Payload Assembly, and MLLW/LLW Operations. These activities are discussed in detail in the following sections.

This element includes all project management resources directly utilized in supporting Payload Assembly/Shipping of TRU waste, MLLW and/or LLW either stored at the AMWTP or newly generated by AMWTP operations. Work includes management support, baseline preparation, monthly reporting, variance analysis, waste tracking, timekeeping, personnel assessments, and general expertise. In addition

to management resources, this account also captures the required training, outside vendor support, travel, and office equipment not captured in the other work packages. Labor resources in this element are also utilized to support site compliance and safety initiatives. Specifically, High Reliability Organizations (HRO), Keeping Everyone and Yourself Safe (KEYS), Integrated Safety Management System (ISMS), and Employee Safety Improvement Team (ESIT).

24 TRUPACT Operations

This element includes activities associated with TRUPACT operations performed inside Waste Management Facility (WMF)-618. Work scope includes the removal of offsite waste payloads from Type B packaging (TRUPACT/HalfPACT) from other offsite facilities, cleaning and inspections of the Type B packaging, minor maintenance on Type B packaging, loading of certified payloads into the Type B packages, helium leak testing of containment o-rings, onsite movement of TRUPACT trailers, and documentation associated with TRUPACT loading operations.

25 TRU Payload Assembly

This element includes activities associated with TRU payload assembly. This scope of work is performed inside WMF-635 and includes the movement of certified waste containers for payload assembly staging, disassembling waste payloads received from offsite facilities, assembling direct load standard waste boxes (SWBs), performing equipment and overpack inspections, rolling stock operations, and assembling WIPP certified/intersite waste drums into one of the following groups:

- Three-pack or six-pack of 100-gal product drums
- Seven-pack or fourteen-pack of 55-gal drums
- Ten drum overpacks (TDOPs) consisting of ten 55-gal drums or six 85-gal drums
- SWBs consisting of four 55-gal drums or two 100-gal product drums.

26 MLLW/LLW Operations

This element includes all project resources directly utilized in supporting disposal of MLLW and LLW either stored at AMWTP or newly generated by AMWTP operations. This element includes the activities associated with MLLW/LLW operations. Work scope includes the movement of certified waste containers within operations area, container integrity inspections, rolling stock operations, LLW/MLLW payload assembly activities, and final trailer loading to meet offsite shipping requirements to the appropriate TSDF. Nonlabor resources include pallets, lumber, containment pools, and other consumables associated with the assembly and shipment of MLLW/LLW.

27 TRU Transportation/Shipping

This element includes project resources directly utilized in the transportation/certification and shipping of stored AMWTP waste and ICP waste, which is to be disposed as TRU waste at WIPP. Transportation/certification includes the selection of containers for payloads, including inspecting the waste, marking, labeling, and manifesting to meet all applicable regulations and requirements, including DOT and WIPP WAC. This element also includes data entry and certification of the assemblies, payloads, and shipments in the WWIS and WDS. The scope includes labor and nonlabor elements (including consumables, training, and travel) for completing this scope.

28 MLLW Transportation/Shipping

This element includes the packaging and transportation of all MLLW and LLW for disposal at offsite locations, such as NNSS and commercial disposal facilities such as Energy Solutions' (ES) Clive, Utah, TSDF.

Following certification of such wastes for disposal (not included in this element), the waste will be packaged, marked, labeled and manifested to meet all applicable regulations and requirements, including DOT regulations and WIPP WAC. The scope includes labor and nonlabor elements (including consumables, training, and travel) for completing this scope.

29 Other Transportation/Shipping

This element includes resources directly utilized in the transportation/certification and shipping of stored AMWTP waste ICP waste as well as TRU waste from other DOE sites and INL tenants, which is proposed to be disposed as TRU waste at WIPP or returned to generator sites for completion of disposition. Other transportation/certification and shipping includes the selection of containers, along with inspection of the shipping containers, placarding, and hazardous waste manifesting. This activity also includes data entry and certification of the assemblies, payloads, and shipments in the WWIS and WDS for disposal at WIPP or as an intersite shipment. The scope includes labor and nonlabor elements (including consumables, training, and travel) for completing this scope.

30 Maintenance Transportation/Shipping

This work package includes the PM and CM that directly supports operation of the transportation/shipping scope. Maintenance costs were developed using FY-11 and -12 actual costs.

The maintenance requirements are based on historical data and projected need based on the shipping volumes discussed above for the various shipping or disposal containers.

31 Management Disposal

This element includes all project management resources directly utilized in supporting the treatment and disposal of MLLW and LLW either stored at AMWTP or newly generated by AMWTP operations. Work includes management support, baseline preparation, monthly reporting, variance analysis, waste tracking, timekeeping, and personnel assessments. In addition to management resources, this account also captures the required training, travel, and office equipment not captured in the other work packages.

32 Offsite MLLW Disposal

This element captures the disposal cost associated with the disposal of MLLW at ES and/or the NNSS. All work pertaining to disposal is performed at the receiving facility. This element does not include treatment costs.

33 Offsite LLW Disposal

This element captures the resources necessary to certify, review, and approve LLW containers in the INL Integrated Waste Tracking System (IWTS) for offsite disposal at the applicable TSDF. An LLW waste profile has been developed for ES. No treatment is required for LLW. This also includes the equipment and supplies to support the disposal of LLW. These supplies include Industrial Packaging Type 2 (IP-2) shredder over pack bags, IP-1 cargo bags, pallets, and other miscellaneous supplies and services related to this work package. This element captures the disposal cost associated with the disposal of LLW at ES and/or NNSS. The disposition costs of empty cargo containers currently reside in this work package for FY-14 and -15.

34 Nuclear Assurance

This provides resources for ensuring safe and compliant operation of all equipment, structures, components, activities, and processes associated with the AMWTP. The Nuclear Assurance team ensures ISMS principles and functions are integrated into all processes. They report functionally to the Performance Assurance Manager for consistency in Contract Assurance execution.

The Nuclear Assurance team and the administrative support addressed in this work package establishes and communicates the vision and strategies for the AMWTP work execution priorities for strategic planning; the development and oversight of work scope, schedule, and budget; the technical oversight of activities and personnel; and the resolution of complex technical issues. The Nuclear Assurance team includes Nuclear Facility Manager (NFM) qualified personnel.

35 628 Tent Operations

This covers the treatment tents, which are areas where treatment and reoverpacking can be performed. There are containers in the inventory that require treatment of prohibited items. In the WMF-628 Tent Operations, prohibited items such as prohibited amounts of liquid can be treated. The waste must meet WAC prior to disposal; however, a number of containers have been found through RTR that must be treated before they can be shipped and disposed. The current population of containers is from inorganic solidified material waste streams. Containers that have been overpacked cannot be shipped in their current configuration. In the WMF-635 Tent Operations these containers can be unoverpacked and then placed in approved shipping overpacks (e.g., SWBs and TDOPs). In most cases these containers are available for shipment if the overpack was appropriate. Recovery Action Item (RAI) 8, Enhance Treatment Tent Process, is on schedule. The next generation process (i.e., Drill and Drain) is proceeding per the implementation schedule.

There are containers in the inventory that require treatment of prohibited items. In the WMF-628 Tent Operations, prohibited items such as prohibited amounts of liquid can be treated. The waste disposal must meet the WAC prior to disposal; however, a number of containers have been found through RTR that must be treated before they can be shipped and disposed. There are various types of treatment that can be conducted in the tent including: relidding of containers, reduction in layers of confinement, and liquid absorption (LA). There are several types of LA that will be required to be performed including: LA at the top of the waste, LA between the drum and the liner, LA at the bottom of the waste, and LA throughout the waste.

Operations at the treatment tent will be set up in campaigns so that the most effective processing can be completed. In most cases, the containers require additional characterization activities prior to shipment for disposal.

The number of containers that need to be treated through this activity is about 2,624 containers. These containers are currently in permitted storage. In addition, it is expected that containers of solidified waste being retrieved will require treatment for LA. To operate the tent most effectively, one shift will work this activity, which includes preparation of the tent and glovebox, and preparation for the scheduled activity. Preparation requires equipment and supplies as outlined in the procedure to conduct the scheduled activity. This activity is scheduled by shifts and depends on the inventory provided to the activity.

36 635 Tent Operations

Containers that have been overpacked cannot be shipped in their current configuration, unless prior approval is received from the Carlsbad Field Office (CBFO). In the WMF-635 Tent Operations the 55-gal containers can be unoverpacked from the 83/85 containers. The 55-gal containers will then be placed in approved shipping overpacks (e.g., SWBs). In most cases, once the SWBs are completed, only FGA is

required and these containers are available for shipment. To operate the tent most effectively, one shift will work this activity which includes preparation of the tent and glovebox, preparation of the SWB for acceptance of waste and removal of the container from the overpack. The next generation process for enhanced treatment tent process will be implemented in the WMF-635 Tent.

37 Onsite MLLW Treatment (Macroencapsulation)

This element captures the resources necessary to certify, review and approve MLLW containers in the IWTS for onsite treatment followed by offsite disposal at the NNSS. This also includes the labor, equipment and supplies to perform onsite macroencapsulation at the AMWTP. These supplies include HDPE Macro Packs, macro pallets, and other miscellaneous supplies and services related to this work package.

38 Offsite MLLW Treatment

This element captures the resources necessary to certify, review, and approve mixed low level waste (MLLW) containers in the IWTS for offsite MLLW treatment. Offsite MLLW treatment contracts with ES and Permafix are included within this element for MLLW that is not treated onsite at the AMWTP.

39 Project Management

This element includes senior management and leadership (key personnel) over the AMWTP work scope. As such, this element encompasses all scope and resource requirements to deploy the AMWTP key personnel, (e.g., the Project Manager, Waste Programs Lead, Environment Safety and Health (ES&H) Lead, Plant Manager, Lead Legal Counsel, and Business Manager). This element does not include the direct line management of day-to-day operations. This element will also be used to capture project management costs not included elsewhere.

AMWTP will develop and maintain a project management system, including submittal of a project execution plan (PEP) in accordance with the Project Control Systems and Reporting Requirements. This activity includes submittal of monthly status reports as required. The monthly status reports will include cost and schedule variance analysis at the control account level of the WBS and a discussion of critical technical or programmatic risk issues.

40 Legal

The General Counsel provides counsel to AMWTP management on legal and regulatory issues, including, but not limited to: ES&H, employment, procurement, contracts, and disputes. The General Counsel advises AMWTP management of potential legal risks and liabilities to AMWTP and identifies options to avoid or minimize those risks. The General Counsel assists in the development of strategies for AMWTP to achieve and maintain compliance with all applicable federal, state, and local laws; DOE directives and orders; contractual provisions; and other applicable requirements. A single attorney familiar with environmental, employment, labor, and contract law, supports the AMWTP.

Inasmuch as AMWTP intends to employ only one attorney, AMWTP will retain outside counsel for any court proceeding in which it is involved. For other matters, AMWTP will retain outside counsel when in-house counsel does not have the necessary expertise, when in-house counsel's workload prevents counsel from providing timely support, or when an ethical conflict of interest exists.

41 Human Resources

This element includes HR support for the AMWTP contract scope of work including a human capital management (HCM) program, diversity program, HR liaison to line management, benefits, labor relations, and compensation.

Fifty percent of HR activities will be conducted at the INL site, and 50% will be conducted from the town of Idaho Falls. Administrative functions are performed under normal office conditions.

42 Project Controls

The scope of this element includes developing and implementing a Project Controls System (PCS), documented within a System Description (SD), to support the AMWTP. The PCS will be developed in compliance with DOE Order (O) 413.3A and American National Standards Institute (ANSI)/Energy Information Administration (EIA) 748. A tailored approach will be developed for the EVMS based on earned value management (EVM) protocol that states operations projects can employ a tailored approach.

43 Procurement

This element includes procurement support for the AMWTP contract scope of work including prime contract administration, subcontract administration, commodities procurement, materials distribution, inventory control, warehouse operations, fleet management and mandatory services procured from other INL site contractors.

44 Financial/Accounting

This element provides resources required to support cost collection and financial reporting to the DOE and company management as well as the maintenance of the company financial systems. Financial systems and processes include: Accounts Payable, General Ledger, Banking, Payroll, Benefits Accounting, Cash Management/Treasury functions, Corporate Accounting, Cost Reporting, and other financial services.

45 Internal Audit/PA

The PA process objective is to apply a systematic and disciplined approach to evaluate and improve the effectiveness of our controls and corporate governing processes. These programs and processes are described in PD-Q&SI-01, Contractor Assurance Program Description; PD-Q&SI-02, Corporate Operating Experience Program Description; ADMN-PLN-02, Risk Management Plan; RPT-094, Audit Implementation Design Document; RPT-095, AMWTP Annual Audit Plan; MP-PASS-26.1, AMWTP Performance Reporting; and RPT-PEP-01, Project Execution Plan.

46 Central Engineering Management

This element includes management and administrative staff to support all activities in the elements below. This cost account provides engineering support and services for the AMWTP.

47 System Engineering

This element includes central engineering support and services for the AMWTP contract scope of work including engineering standards and expectations, configuration management, engineering design, systems engineering, fire protection engineering, drafting and modeling, approval of all facility modifications, and support to maintenance for the continued reliable operations of plant facilities and equipment to safely and compliantly achieve AMWTP mission and goals.

48 Nuclear Safety

The scope of this element is to provide criticality engineering and nuclear safety support and services to AMWTP, including revising and maintaining the DSA and TSRs, and performing unreviewed safety question (USQ) reviews.

49 Work Control

The scope of this element is to develop and implement an improved work planning and control process consistent with the Energy Facility Contractors Group (EFCOG) and URS Corporate Work Planning and Control Standards while continuing to ensure safe and efficient work control under the existing work planning and control process.

50 Information Technology

The following primary activities are required to ensure that effective IT services (including plant automation) will be available to the project mission. Specific tasks and responsibilities under the IT function include but are not limited to:

- Maintain AMWTP facility instrumentation and control systems
- Ensure compliant operation of business systems applications on all IT platforms
- Provide computer software application and internet support services to users
- Perform all cyber-security functions including coordinating joint efforts with Safeguards and Security personnel to implement an effective cyber-security program
- Participate in business system upgrade activities as required
- Maintain and administer software configuration management including offline testing of all approved changes.

51 ISIH

AMWTP will conduct activities in compliance with safety and environmental protection requirements including, but not limited to, those listed on the List of Applicable DOE Directives (Section J, Attachment B). AMWTP will take actions necessary to preclude accidents and injuries and keep worker exposures as low as reasonably achievable. AMWTP will promptly respond to operational events.

AMWTP will provide technical support to line management, workers, and junior Industrial Safety/Industrial Hygiene (IS/IH) staff regarding the implementation of IS/IH requirements and company procedures. The main emphasis will be daily support of operation activities in response to emergent requests and scheduled work on the plan of the day (POD). Direct IS/IH resources on shift to see that work is conducted without interruptions.

IS/IH performs IH exposure assessment/hazard assessment and necessary sampling activities to characterize employee exposure to hazardous agents and completes walk-downs for work control development utilizing experience and knowledge to develop implementable control sets. IS/IH personnel work independently to identify noncompliant conditions and provide solutions to management with minimal direction. IS/IH assist management and employee safety team members on accident investigation and in determining the root cause in accordance with company procedures. IS/IH performs assigned Management Assessments as required.

52 ES/H

AMWTP will maintain an ES&H program to ensure the protection of workers, the public, and the environment. AMWTP will operate the ES&H program as an integral, but visible, part of how business is conducted. This includes prioritizing work planning and execution; establishing clear ES&H priorities; allocating resources to address programmatic and operational considerations; collecting and analyzing samples; correcting noncompliance; and addressing hazards for AMWTP facilities, operations, and work.

AMWTP will adopt existing regulatory required implementation plans and processes, such as Title 10 of the Code of Federal Regulations (CFR) 835, Occupational Radiation Protection; 10 CFR 830, Quality Assurance Plan; 10 CFR 851, Worker Safety and Health Program; 10 CFR 850, Chronic Beryllium Disease Prevention Program; the USQ process; and a compliant ISMS and Environmental Management System (EMS). AMWTP may elect to update the adopted plans and resubmit them for DOE approval.
The scope of work for this element also includes application of specific Radiological Safety Programs which maintain robust dosimetry and bioassay programs.

AMWTP will establish and maintain a single ISMS as required by Department of Energy Acquisition Regulations (DEAR) 970.5223-1, Integration of Environment, Safety, and Health into Work Planning and Execution. The ISMS program will ensure that safety and environmental protection considerations are integrated throughout the entire work planning and execution process (including subcontracts as appropriate). ISMS will extend through the execution of individual work packages where jobsite safety is ensured for each worker. AMWTP will ensure that the principles of ISMS serve as the foundation of the implementing mechanisms for work at the site. AMWTP will also ensure that the structure of requirements to achieve nuclear safety is based on sound principles such as defense in depth, redundancy of protective measures, robust technical competence in operations and management oversight, and compliance with DOE directives embodying nuclear safety requirements.

53 Quality Assurance

This element covers the AMWTP quality assurance (QA) program. AMWTP will maintain a QA program that complies with 10 CFR 830, DOE O 414, and is based on the current ANSI/ASME Nuclear Quality Assurance-1 (NQA-1) standard. In addition, the QA program ensures compliance with the WIPP HWFP and current version of the CBFO Quality Assurance Program Document.

The AMWTP QA Program is based on the principle that work shall be planned, documented, performed under controlled conditions, and periodically assessed to establish work item quality and process effectiveness and to promote improvement. Management, line personnel, and organizations are responsible for planning and achieving quality and for promoting continuous improvement. QA organizations and personnel are responsible for the facilitation, support of, and verification of the achievement of quality.
AMWTP will maintain QA and software QA programs necessary to improve compliance, safety, and productivity.

54 Training

This element provides resources to maintain operational, facility/process activity, and nonoperational training programs for the AMWTP. Training programs include but are not limited to, those for waste handling (WH)/payload assembly (PA)/shipping, retrieval, AMWTF, characterization, and maintenance operations. Facility/process activity training programs include such topics as hazardous waste operator

and emergency response (HAZWOPER), radiological safety and fall protection. The nonoperations training programs include any general training not included in the operational training programs or facility/process activity training programs.

Activities for training programs include preparing course material and presenting training to appropriate personnel including maintenance, radiological safety, and any other required support personnel. Activities also include providing resources to maintain all training records and the training records and information network (TRAIN) and providing management and administrative support to the training organization. Other activities include preparation and maintenance of qualification packages, examinations and test banks, proctoring examinations and testing for qualification and other required training (i.e., Access), preparation of training needs analysis, job positions analysis, and training requirements for all program descriptions (PD), management procedures (MP), instructions (INST), and TRU programs changes, evaluation of course material, on-the-job training, and affiliated instructional staff. Specific, identified training for qualifications may be contracted and performed offsite.

55 Environmental Compliance Program

AMWTP will comply with all applicable environmental requirements, permits, and compliance documents including, but not limited to, the Hazardous Waste Management Act (HWMA), RCRA permits, Idaho Toxic Air Pollutant and Clean Air Act air permits, the Site Treatment Plan under the Federal Facility Compliance Act, 1989 Article of Noncompliance Consent Order, and the 1995 Idaho Settlement Agreement.

AMWTP will support waste generators and ship conditional, hazardous, and universal waste offsite by performing the following activities:

- Provide management expertise in the area of environmental compliance (EC) to implement and oversee AMWTP's EC program
- Manage overall EC activities for program execution
- Provide management support in reviewing work packages, subcontracts, hazard assessments, emergency drills, and operations drills
- Perform work place inspections
- Support DSA and other project documents
- Ship hazardous and universal waste
- Waste generators services
- Prepare and submit "Deliverables" identified below.

56 AMWTP Facility Permits

AMWTP will comply with all applicable environmental requirements, permits, and compliance documents including, but not limited to, the HWMA, RCRA permits, Idaho Toxic Air Pollutant and Clean Air Act air permits, the Site Treatment Plan under the Federal Facility Compliance Act, 1989 Article of Noncompliance Consent Order, and the 1995 Idaho Settlement Agreement. Permit compliance includes maintenance of all personnel, training, equipment, facilities, and procedures.

This element scope includes submitting to the DOE or the regulator, as required, certified permit modification requests (e.g., AMWTP-specific HWMA/RCRA permits, air permits) to assume ownership, namely change the operator name and identify a responsible corporate officer for the permits. The ICP contractor is responsible for site wide coordination for RCRA and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulatory programs. The INL contractor is responsible for site wide coordination for regulatory programs other than RCRA and CERCLA. AMWTP will provide to the INL or ICP contractors, as applicable, the appropriate AMWTP-

related information, data (certified if necessary), and support necessary to complete the site wide functions.

57 Analytical Laboratory

This element covers the costs associated with the laboratory analysis support work needed for operation of the AMWTP Analytical Chemistry Laboratory (ACL). AMWTP requires three separate types of analytical laboratory support: solids analysis; water, soils, and National Emission Standards for Hazardous Air Pollutants (NESHAPs); and analyses to ensure worker safety and protection.

The first type of laboratory analysis is the solids analysis required by the WIPP HWFP as a check for hazardous constituents in the waste. This analysis is only a requirement for TRU waste disposal. Further, it is only a requirement for waste categorized as soils or solids, and only on a statistical basis. The requirement is an analysis and documentation of coring samples. AMWTP has the only certified coring system within the DOE, and as a consequence, performs this service for all sites (i.e., Accelerated Retrieval Project [ARP], INTEC, offsite waste).

The second type of laboratory analysis is for the water, soils, and NESHAP to demonstrate environmental compliance.

The third type of laboratory analysis is needed to ensure worker safety and protection. These include metals, including beryllium, and Polychlorinated biphenyl (PCB) analyses.

58 Facility Operation and Maintenance

The scope of work for this control account is to maintain and improve, as necessary, all AMWTP equipment, facilities, and utilities to maximize performance and ensure that they are fully operational throughout the contract period.

Specifically, by the end of the contract period, or as equipment, facilities, and utilities are no longer needed to process waste, they will be placed in a standby condition that would allow for complete resumption of operation in a stable state within a reasonably short period of time (i.e., able to process waste within one month). Even in a standby condition AMWTP shall perform and keep current all required maintenance, including preventive maintenance and calibrations. All systems required to keep the facility in a safe condition shall be maintained operational.

AMWTP will not employ a run-to-failure approach on any systems or equipment at the AMWTP during the term of the contract without Contracting Officer approval. To the extent possible, AMWTP will time any planned facility maintenance outages with planned WIPP maintenance outages and other planned shipping curtailments to avoid any DOE-wide impacts to the TRU shipping program.

59 Facility Improvements and Upgrades

Specific initiatives have been identified to upgrade or improve the reliability, and individual work packages have been created for each item. This control account plans, executes, and closes projects to implement the initiatives. The description for each work package is in the following sections.

The work scope for the duration of the contract includes the following:

- Project Managers time for planning and execution
- Planning packages for future upgrade projects
- EFCOG Decommissioning and Deconstruction (D&D) Working Group meeting support
- HRO support
- Project Management Office (PMO) procedure development/revision

- Startup Management Oversight support
- Develop new approach for emptying and large boxes using RCE technology
- Develop new approach to replace concept of the Container Repackaging Enclosure (CRE) for drums using drum packaging system (DPS).

60 Records Management

Records Management labor coordinates the methodology and responsibilities for ensuring requirements are evaluated, and if applicable, integrated into implementing documents and work processes. The Records Management process provides direction for demonstrating requirements implementation through requirements roll down implementation matrices controlled through the Document Control and Records Management systems.

Documents are required to safely and effectively manage, perform, and assess work. Using the graded approach, management identifies those documents needed to accomplish these objectives and determine the level of control required. Controls include activities such as preparation, review, approval, distribution, usage, availability, revision, and disposal of documents. RM's focus in the control process for documents is to ensure external review where appropriate such as DOE and CBFO notices/correspondence for review, posting documents for use and RM program including the final QA checks and approvals.

The RM function also includes identification and processing requirements for the review and approval of specific documents requiring DOE-ID, CBFO, and/or NNSS acceptance. AMWTP electronic databases are used in conjunction with the required instructions in order to support real time online delivery of controlled documents.

61 Document Services

This element covers an AMWTP records management system compliant with all federal regulatory requirements, including records management requirements in 36 CFR 1220–1236.

This includes, but is not limited to, maintenance, storage, protection, and disposition of active and inactive records, retrieval from onsite storage facilities, and support for ongoing discovery efforts associated with litigation. AMWTP will provide a complete records inventory list in a suitable format to the post-closure records custodian identified by the Contracting Officer. AMWTP will incorporate records management and records management archival functions into the design, development, and implementation of information systems. This activity is transferred to 14.01, Records Management, beginning in FY-13.

In addition to the records management program, AMWTP will provide document control and document preparation programs that are compliant all relevant QA and conduct of operations requirements.

62 Safeguards, Security, and Counterintelligence

This element covers establishing and maintaining security plans, as required by DOE directives, and coordinate regularly with the INL contractor, as needed, to ensure appropriate levels of protection against: unauthorized access; theft, diversion, or loss of custody of nuclear materials; espionage; loss or theft of classified information or Government property; and hostile acts that may cause unacceptable adverse impacts on national security or the health and safety of DOE and contractor employees, the public, and the environment.

AMWTP will provide input, as needed, to the INL contractor for applicable elements of the Site Safeguards and Security Plan and participate in safeguards and security drills and exercises as required by

DOE directives. The INL contractor is responsible for site-wide security. AMWTP will be responsible for security within the AMWTP.

AMWTP will prepare and submit applications for security clearances, for adjudication by DOE-ID, as required for work under this contract. AMWTP will maintain the security/facilities infrastructure at AMWTP and will promptly adjust to the Security Condition determined by DOE.

AMWTP will also develop and maintain a Nuclear Materials Control and Accountability Program, Operations Security Program, Personnel Security Program, Information Security Program, Physical Security Program, Foreign Visits and Assignments, and a General Security Awareness Training Program as required by DOE directives.

AMWTP Emergency Management resides within the Safeguards and Security organization. AMWTP will develop and maintain all AMWTP Emergency Management Plans and Procedures. AMWTP will conduct training and exercise programs to protect personnel, environment, and property in the event of an emergency. AMWTP will coordinate with the INL contractor for support and to ensure the appropriate levels of protection are met.