



Specification

Section 01505

Construction

Waste Management

April 25, 2012

Revision 6

SAND2012 1938 P

This document has undergone formal review and approval and been reviewed by a Derivative Classifier and its contents have been deemed unclassified/unlimited release.



Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC0494AL85000.

CONSTRUCTION STANDARD SPECIFICATION

SECTION 01505

CONSTRUCTION WASTE MANAGEMENT

TABLE OF CONTENTS

PART 1 - GENERAL	1
1.01 RELATED DOCUMENTS	1
1.02 SUMMARY.....	1
1.03 DEFINITIONS.....	1
1.04 SUBMITTALS	3
1.05 QUALITY ASSURANCE.....	3
1.06 DELIVERY, STORAGE, AND HANDLING	4
PART 2 – PRODUCTS (Not Used)	5
PART 3 – EXECUTION	5
3.01 GENERAL REQUIREMENTS.....	5
3.02 WASTE MINIMIZATION REQUIREMENTS	5
3.03 SMALL CONSTRUCTION PROJECTS	6
3.04 INFRASTRUCTURE PROJECTS	6
3.05 LARGE BUILDING CONSTRUCTION PROJECTS	8

Change Log

Rev	By	Date	Type	Change Description	ID
6	AG/KLB	2/2/12	Subst	Added FMOC cover and change log. Edited for punctuation and grammar. Revised Infrastructure and Large Projects definitions and included Green Waste definition. Revised Section 3.04 to include former attachment about infrastructure projects. Updated Attachment A, <i>C&D Recycle Center Guidance Document</i> and revised former Attachment C to become Attachment B, <i>C&D Waste Management Plan Template</i> .	
6	AG/KLB	4/25/12	Admin	Updated name of the recycling center in 1.02.A.	
6	AG/KLB	5/2/12	Admin	Separated attachments from main document so they can be accessed separately.	

CONSTRUCTION STANDARD SPECIFICATION

SECTION 01505

CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes: Construction waste management requirements for all construction, renovation, demolition, repair and land clearing project activities. This section defines the construction waste management requirements for work conducted at Sandia National Laboratories (SNL), based on waste minimization and diverting construction waste from landfill disposal to the extent practical.
 - 1. Small construction projects (defined in 1.03) shall segregate construction materials and debris as appropriate for disposition at the SNL Construction and Demolition (C&D) Recycle Center located on the west side of Building 967, Solid Waste Collection and Recycling Center (see Attachment 01505-A).
 - 2. Infrastructure projects (defined in 1.03) shall, as appropriate, segregate scrap metal for recycling, and deliver concrete and asphalt to the SNL Concrete and Asphalt Recycle Area (see Attachment 01505-A).
 - 3. Large building construction projects (defined in 1.03) shall implement waste management practices herein and in addition follow the specifications set forth in the Construction Master Specification – Section 01350, *LEED® Requirements*.
- B. Related Sections
 - 1. Division 1, Section 01065, *Environmental, Safety, and Health for Construction and Service Contracts*

1.03 DEFINITIONS

- A. Construction and Demolition (C&D) Waste (per 20 NMAC 9.1, Solid Waste Management): "Construction and demolition debris" means materials generally considered to be not water soluble and nonhazardous in nature, including, but not limited to, steel, glass, brick, concrete, asphalt roofing materials, pipe, gypsum wallboard and lumber from the construction or destruction of a structure project, and includes rocks, soil, tree remains, trees and other vegetative matter that normally results from land clearing. If construction and demolition debris is

mixed with any other types of solid waste, it loses its classification as construction and demolition debris. Construction and demolition debris does not include asbestos or liquids including, but not limited to, waste paints, solvents, sealers, adhesives or potentially hazardous materials.

- B. Clean: Untreated and unpainted; uncontaminated with adhesives, oils, solvents, tapes, textures, mastics, and like products.
- C. Disposal: Acceptance of solid wastes at a legally operating facility for the purpose of landfilling.
- D. Green Waste: Biodegradable waste generally consisting of leaves, grass clippings, weeds, branches, and stumps. Such waste may be generated through activities such as clearing, grubbing, tree removal, and trimming.
- E. Infrastructure Project: Construction projects involving utility supply and distribution systems, central utility plants, roadways, site development, parking lots and walkways.
- F. Large Building Construction Project: New building projects including Line Item Projects and General Plant Projects (GPP).
- G. Non-Construction Waste: Personnel and/or household trash such as paper, food containers, beverage containers, and other items not resulting from construction activities.
- H. Pollution Prevention (P2) Program: Administers, manages, and performs activities to reduce waste in SNL/NM operations, including construction and demolition projects.
- I. Recycling: The process of sorting, cleansing, and reconstituting materials for the purpose of using the materials in the manufacture of a new product.
- J. Reuse: Materials that are recovered for use in the same form, on- or off-site.
- K. Salvage: To remove waste materials from the site for resale or reuse by a third party.
- L. Sandia Delegated Representative (SDR): Person authorized in the Contract to act as delegated Sandia representative for the specific purpose of review, inspection, and acceptance of work, and to interpret plans, specifications, codes and standards.
- M. Sandia Construction Observer (SCO): SDR's contract field representative to monitor, document, and report on the progress, quality, and safety of construction work in accordance with contract specifications and plans, and applicable codes. The SCO is responsible for coordinating outages associated with construction activities. The SCO does not exercise supervision over Contractor's employees.
- N. Small Construction Projects: Construction projects other than those defined as a Large Building Construction Project or an Infrastructure Project. All projects with funding lower than the General Plant Project (GPP) and including Firm Fixed Price (FFP) and Time and Materials (T&M). Such projects typically include

Facilities Express projects, routine maintenance projects, minor walkway or parking lot repair projects, etc.

- O. Waste Minimization: Any practice that reduces the amount of waste generated prior to recycling or disposal.

1.04 SUBMITTALS

A. Small Construction Projects

- 1. No formal submittals are required for small construction projects, only adherence to the applicable practices and procedures defined herein.

B. Infrastructure Projects

- 1. No formal submittals are required for Infrastructure Construction Projects, only adherence to the applicable practices and procedures defined herein.

C. Large Building Construction Projects

- 1. All submittals associated with Large Building Construction Projects shall follow the requirements set forth in the Construction Master Specification – Section 01350, LEED Requirements.

1.05 QUALITY ASSURANCE

A. General

- 1. Comply with applicable environmental, safety, and health laws, rules and regulations, as amended, of the Federal, State, and local governments, the Department of Energy and SNL concerning management of construction, renovation, alterations, repair, demolition, and land clearing waste.
- 2. Use only facilities properly permitted by the State of New Mexico, and by local authorities as applicable.
- 3. Do not perform work until applicable environmental permits are obtained and notifications given for construction activities.
- 4. Contractor shall bear costs for project delays due to noncompliance with required permits or failure to provide required notifications.

B. Construction Waste Characterization

- 1. Construction waste resulting from execution of this contract shall be evaluated for the potential to contain or be contaminated with hazardous, chemical, or radiological substances in accordance with Section 01065, *ES&H for Construction and Service Contracts*.
- 2. Construction waste determined to contain or be contaminated with hazardous, chemical, and/or radiological substances shall be managed in accordance with Section 01065, *ES&H for Construction and Service Contracts*.

C. Construction Material Ownership

1. Property items and equipment that may be reused for their intended purpose are not considered waste and shall be managed as U.S. Government Property. Intact and dismantled equipment and material originating from Sandia premises and removed during the work activity shall remain the property of the U.S. Government and shall be managed as Residue Material and Equipment as defined in Section 01065, *ES&H For Construction and Service Contracts*.
2. All construction waste materials and debris originating from Sandia premises, regardless of the temporary or permanent nature of the materials and debris, are the property of the U.S. Government.
3. No construction waste materials or debris originating from Sandia premises shall be removed from Sandia property for the purpose of salvage, reuse, recycle, or resale unless specifically stated in contract documents.

D. Regulatory Requirements

1. Comply with applicable waste management laws, rules, and regulations, as amended, of the Federal, State and local governments, the Department of Energy (DOE) and SNL.
2. According to the Federal Pollution Prevention Act of 1990 waste shall be managed according to the following hierarchy: prevention, reuse, recycling, treatment, and compliant disposal.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. On-site Waste Management and Disposal Resources: The following list identifies recycling and disposal resources on site at SNL/NM. Use of on-site SNL resources shall be coordinated through the Sandia P2 Program and/or the SDR (or as further delegated).
1. Construction & Demolition Recycle Center: Located on the west side of Building 967 (Solid Waste Collection and Recycling Center). Accepts construction materials and debris from small construction projects for recycling and disposal.
 2. Concrete/Asphalt Recycle Area: Located at the south end of Tech Area III (map to be provided as needed). Accepts concrete and asphalt materials from all SNL/NM construction projects for recycling. Stores crushed, recycled materials such as Conphalt, CCBC, and other clean fill for Facilities projects.
 3. P2 Tent: Located within the Reapplication Services Yard provides a resource to store and handle palletized construction waste items such as carpet tile and ceiling tile. Materials must be accompanied by the RCT/HMI approved RME form.

4. Green Waste: Currently accepted at strategic areas throughout SNL/NM.
5. Kirtland Landfill: Accepts general construction & demolition waste for disposal.
6. Miscellaneous: Other on-site SNL/NM infrastructure resources exist, such as clean soil reuse, reuseable wood pallets. Coordinate utilization of “other” on-site SNL/NM waste management resources through the Sandia P2 Program and/or the SDR.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 GENERAL REQUIREMENTS

- A. General: Every reasonable effort shall be made to minimize waste generation, as well as recycle, reuse, and salvage generated waste.
- B. Source Separation, Handling, and Storage: Separate, store, protect, and handle at the project site all identified recyclable, reusable, and salvageable waste materials to maximize waste material diversion from landfill. Waste material separation, handling, and storage areas shall be clearly marked and kept neat and clean to avoid contamination, e.g., plastics or foam in metals roll-off, or mixing of materials. Provide waste collection containers in sizes adequate to handle waste from construction activities.
- C. Regulated Hazardous Construction Waste Types: All regulated hazardous construction waste types generated shall be managed in accordance with Section 01065, *ES&H for Construction and Service Contracts*. Where classification of any given waste material is unclear, verify the appropriate disposition with the SDR.
- D. Non-Construction Waste: All non-construction waste shall be segregated from construction waste materials, removed from the site, and properly disposed of by the Contractor.
- E. Training: Provide on-site instruction of appropriate separation, handling and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.

3.02 WASTE MINIMIZATION REQUIREMENTS

- A. The following measures shall be implemented for proactive waste management by all parties involved in construction-related project activities at SNL.
 1. Waste generation shall be minimized to the maximum extent possible.
 2. Waste generation shall be avoided by implementing the following measures:

- a. Reduce packaging of products and materials to minimize packaging waste.
 - b. Ensure proper storage of products and materials to prevent contamination and damage from weather.
 - c. Utilize proper material handling techniques to eliminate breakage.
 - d. Plan and sequence work to efficiently utilize products and materials.
 - e. Enforce just-in-time ordering to eliminate over ordering and ordering error.
3. All diligent means shall be employed to pursue practical and economically feasible reuse, salvage and recycling options for the inevitable waste generated during project activities.
 4. Waste disposal in landfills shall be minimized to the greatest extent possible.

3.03 SMALL CONSTRUCTION PROJECTS

A. The following procedure shall be implemented for planning and use of the Sandia C&D Recycle Center:

1. Review the C&D Recycle Center Disposition Form (see Attachment 01505-A) for a current list of recyclable construction waste materials and debris, facility hours of operation, facility location, and other general information, instructions, and requirements.
2. Segregate recyclable construction waste materials and debris and nonrecyclable waste materials and debris.
3. Transport all construction waste materials (both recyclable and nonrecyclable) to the Sandia C&D Recycle Center. C&D Recycle Center personnel will provide assistance for unloading into the appropriate containers.
4. **NOTE:** If there are no recyclable construction materials within a specific load or shipment, that load or shipment shall be transported directly to the appropriate landfill for disposal.

3.04 INFRASTRUCTURE PROJECTS

- A. **Recyclable Materials:** Depending on scope of work may include concrete, asphalt, scrap metal, wood (pallets, crates, scraps, dimensional lumber, etc.), and cardboard. Contact Pollution Prevention (P2) for assistance with recycling any other materials associated with Infrastructure Projects.
- B. The following procedure shall be implemented for planning and use of the Sandia Concrete and Asphalt Recycling Area (CARA):

1. Various types of concrete and asphalt waste are generated during C&D projects and site operations that are suitable for recycling.
 - a. "Washout" from trucks that deliver concrete to project site.
 - b. Asphalt debris is generated when disturbing roadways and parking lots and concrete debris when removing curb and gutter.
 - c. Reinforced concrete from building foundations and slabs.
 - d. Non reinforced concrete from sidewalks.
2. Contaminants are unacceptable at the CARA. The following items must be separated from concrete and asphalt debris before delivery to CARA:
 - a. Concrete-like products that are composed of low grade concrete mix designs such as pavers and bricks.
 - b. General construction waste, such as wood, wallboard, pipe, cardboard, insulation, fixtures, glass, sandbags, plastic, etc.
 - c. All expansion joint materials in curb and gutter, slabs, and foundations.
 - d. Plastic sheeting of any kind, such as caution tape, washout pit liner material, and landscape underlayment.
 - e. Landscaping materials such as weed fabric.
 - f. General trash (soda cans or plastic bottles, food waste, etc.).
3. Transport all acceptable concrete and asphalt materials to the CARA. Contact PM or P2 Staff for directions and location of CARA.
 - a. The CARA has three specific drop-off zones for asphalt, un-reinforced concrete, and reinforced concrete. Drop off concrete and asphalt materials separated according to these three categories.
 - 1) In the event a mixed load concrete and/or concrete and asphalt is unavoidable, the mixed load shall be placed in the location of material constituting the largest quantity of material.
 - 2) For example, a mixed load of predominantly asphalt and a lesser amount of un-reinforced concrete shall be delivered to the asphalt material pile.
 - 3) Any mixed amount containing reinforced concrete shall be placed in the reinforced concrete pile.
4. In the event contamination cannot be separated from a load of concrete and/or asphalt material, the entire load must be disposed as general construction waste to the KAFB landfill.

5. Other recyclable materials such as metals, cardboard, and scrap wood may be generated during Infrastructure Projects. Please refer to the C&D Recycle Center Guidance Document (Attachment 01505-A) for a current list of recyclable construction debris. The Guidance Document provides facility hours of operation, facility location, and other general information, instructions, and requirements for recycling of these items.

3.05 LARGE BUILDING CONSTRUCTION PROJECTS

- A. Follow guidelines set forth in the Construction Master Specification – Section 01350, *LEED Requirements*.
- B. Implement waste management practices and procedures in accordance with the approved Construction Waste Management Plan. Maintain such practices and procedures throughout the life of the project.
- C. Transportation: Arrange for regular collection, transport from the site, and delivery of recyclable waste materials to approved recycling centers to keep construction site clear.
- D. On-Site Recordkeeping: Maintain record keeping procedures with provisions for:
 1. Tracking collections of waste materials at the site and deliveries to recycling, reuse, salvage, and landfill facilities.
 2. Maintaining on-site logs that include for each load of materials removed from the site: type of material, load weight, recycling/hauling service, and date accepted by recycling service or landfill.
 3. Use of the Waste Diversion/Landfill Log provided as an attachment to the generic Plan template.
 4. Accessibility to the SCO for verification of construction waste recycling. Legible copies of on-site logs, manifests, weight tickets, and receipts. Manifests shall be from recycling and disposal site operators that can legally accept the materials for the purpose of recycling, reuse, salvage, or disposal.
- D. Contamination: Prevent contamination of recyclable waste materials. Remove any contamination inadvertently deposited in recyclable waste material containers. Provide cleanup of excessive contamination at recycling vendor locations when such contamination is not controlled at the project site.

END OF SECTION