Materials Sustainability & Pollution Prevention Program Plan

New Mexico Site
PG470227, Revision 7

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SANDIA NATIONAL LABORATORIES / NEW MEXICO
MSP2 PROGRAM PLAN APPROVAL

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Revision History

Revision	Effective Date	Summary of Changes
0	December 21, 2005	New Document, first revision
1	September 29, 2006	Updated administrative, references, and signatories
2	September 27, 2007	Updated administrative, references, and signatories
3	September 30, 2008	Updated administrative, references, and signatories
4	October 27, 2009	Updated administrative, references, and signatories
5	March 30, 2011	Updated administrative, references, and signatories
6	August 30, 2012	Regulatory drivers, annual activities, and goals.
7	February 5, 2013	Program name and annual activities

Acronyms and Abbreviations

AOP	Administrative Operating Procedure
AP	Affirmative Procurement
C&D	Construction and Demolition
CARA	Concrete and Asphalt Recycling Area
CEP	Chemical Exchange Program
CPG	Comprehensive Procurement Guidelines
DOE	U.S. Department of Energy
ECC	Environmental Compliance Coordinator
EMS	Environmental Management System
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPEAT	Electronic Product Environmental Assessment Tool
ER	Environmental Restoration
ES&H	Environment, Safety, and Health
FEC	Federal Electronics Challenge
FEMP	Facilities Engineering and Management Program
FOP	Field Operating Procedure
ft	foot (feet)
FY	Fiscal Year
GIS	Geographic Information System
HQ	Headquarters
HWMF	Hazardous Waste Management Facility
IH	Industrial Hygiene
ISO	International Organization for Standardization
ILMS	Integrated Laboratory Management System
ISMS	Integrated Safety Management System
JIT	Just-in-Time
KAFB	Kirtland Air Force Base
LEED	Leadership in Energy and Environmental Design
LSS	Lean/Six Sigma
MOW	Members of the Workforce

MSP2	Materials Sustainability and Pollution Prevention
NEPA	National Environmental Policy Act
NNSA	National Nuclear Security Administration
P2	Pollution Prevention
PHS	Primary Hazard Screening
POC	Point of Contact
PPTRS	Pollution Prevention Tracking and Reporting System
R&A	Review and Approval
RCRA	Resource Conservation and Recovery Act
RME	Residue Material and Equipment
ROA	Recycling Opportunity Assessment
SA	Sustainable Acquisition
Sandia	Sandia Corporation
SME	Subject Matter Expert
SNL/NM	Sandia National Laboratories/New Mexico
sq ft	square foot (feet)
SSO	Sandia Site Office
SSP	Site Sustainability Plan
SSPP	Strategic Sustainability Performance Plan
SWCRC	Solid Waste Collection and Recycling Center
TA	Technical Area
TEDS	Training and Employee Development System
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
WIMS	Waste Information Management System

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1.0   Introduction

Sandia Corporation (Sandia) has a formal framework for managing its operations called the Integrated Laboratory Management System (ILMS) that flows through Sandia's contract with the U.S. Department of Energy (DOE). The ILMS and the supporting business rules and documents, such as this plan, are the means by which Sandia satisfies DOE's contractor assurance requirements. The Environmental Management System (EMS) is the environmental component of the Environment, Safety, and Health (ES&H) Assurance Dashboard through which policy is developed and promulgated and environmental programs are implemented within divisions. DOE Order 436.1, *Departmental Sustainability*, was established to ensure that EMS and site sustainability are at the forefront of environmental excellence. This order is not within the Management and Operating Contract, because the intent of the Order is currently being implemented through Sandia's requirement for International Organization for Standardization (ISO) 14001 certification.

The integration of an EMS into an Integrated Safety Management System (ISMS) provides a unified strategy for the management of resources; the control and attenuation of risks; and the establishment and achievement of the organization's ES&H goals. Sandia's strategy for achieving this integration is detailed in the EMS Manual (PG470222). A key component of this strategy is the identification of significant environmental aspects and the establishment of objectives and targets to mitigate those impacts. Environmental programs are crucial to the success of EMS and achieving and improving environmental performance.

The key functions of an environmental program are:

- Designating the responsibility for achieving objectives and targets at relevant functions of the organization, and
- Determining the means and timeframe by which they are achieved.

The Materials Sustainability and Pollution Prevention (MSP2) Program, renamed effective in Fiscal Year (FY)13, is multi-faceted and applies to all activities that use resources and generate waste. These activities include both routine and non-routine operations. Routine operations consist of production, analytical, research and development, treatment, storage, and disposal operations, and other, ongoing periodic and recurring work. Non-routine operations consist of one-time activities associated with new construction, deactivation, demolition, decommissioning, and spill clean-up. The term "waste" includes Resource Conservation and Recovery Act (RCRA)-regulated hazardous waste, chemical waste, State-regulated waste, low-level radioactive waste, mixed radioactive/hazardous waste, and commercial solid waste, as well as inefficient use of materials and overconsumption (e.g., buying more than is needed for the project). This Program Plan applies to operations and associated support activities at Sandia National Laboratories/New Mexico site (SNL/NM).

This plan documents the MSP2 Program at SNL/NM and is updated annually. It provides programmatic guidance and specifies strategies, activities, and methods to reduce the quantity

and toxicity of waste and pollutants, conserve resources, and purchase environmentally preferable products.

1.1 Vision

The MSP2 Program promotes and integrates materials sustainability into all SNL/NM operations.

1.2 Scope

The MSP2 Program promotes, investigates, facilitates, and implements resource conservation, waste minimization, recycling, and green purchasing to achieve materials sustainability for operations and supply chain management at SNL/NM.

1.3 Mission

The MSP2 Program provides technical support to line customers to meet their mission needs with the goals of optimizing resource efficiency and minimizing waste. This is accomplished by developing, maintaining, and enhancing the corporate infrastructure to integrate MSP2 into daily work activities. Progress and achievements are reported regularly to the government, to SNL/NM internally, and to the community.

1.3.1 Materials Sustainability and Good Business Practices

According to the U.S. Environmental Protection Agency's vision for Sustainable Materials Management, the materials sustainability ethic is "fulfilling human needs and prosperity, while using materials more productively, reducing toxics and recovering more of the material used." Identification of environmental risks and impacts and the ability to develop and apply MS- and Pollution Prevention (P2)-based solutions has become a critical means to improve processes, reduce operational costs, improve worker safety and health, and protect the environment. The MSP2 group embraces the ethic of materials sustainability and believes all of the above are good business practices.

Integrating materials sustainability into supply chain management processes can help meet Sandia's resource requirements and can do so in a way that "creates value, cuts waste and costs, and reduces exposure to volatile commodity prices – using fewer resources for each unit of output."[1]

Through its Integrated Waste Management Plan, the City of Albuquerque exemplifies the materials sustainability approach by pursuing a goal to end landfilling of waste by 2030, which entails the entire re-thinking of commodity production, consumption, and disposal. This example of a sustainable community goal driving business practices has come into play for SNL/NM which has located more of its operations in the Sandia Science and Technology Park where waste is hauled to the City of Albuquerque landfill.

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[1] McKinsey & Co. on Sustainability and Resource Productivity

To promote and integrate materials sustainability principles into all Sandia operations, the MSP2 Program seeks to: broadly institute procurement of sustainable products and services; achieve 100 percent recycling of all recyclable commodities; incorporate sustainable materials management into process and project design practice; and include green chemistry principles to reduce chemical purchases and hazardous waste generation.

1.4   Site Description and Operations

Sandia is a wholly owned subsidiary of Lockheed Martin Corporation, which manages and operates SNL under the Management and Operations Prime Contract, DE-AC04-94AL85000, with the DOE National Nuclear Security Administration (NNSA) Sandia Site Office (SSO). This contract defines the principles, working relationships, and contractual and legal requirements under which the laboratory operates.

SNL/NM is located on Kirtland Air Force Base (KAFB) in Albuquerque, New Mexico. KAFB is a 51,559-acre military installation that includes 20,486 acres withdrawn from the Cibola National Forest through an agreement with the United States Forest Service (USFS). Located at the foot of the Manzanita Mountains, it has a mean elevation of 5,384 feet (ft) and a maximum elevation of 7,986 ft.

Sandia conducts operations on 5,817 acres of U.S. Air Force property leased to DOE/NNSA, and 2,841 acres of property owned by DOE, yielding a total of 8,658 acres of landholdings for SNL/NM. The site houses a staff of approximately 9,500 that operates in approximately 5.4 million square feet (sq ft) of on-site building space, and an additional 300,000 sq ft of off-site building space leased by DOE/NNSA for SNL/NM. Most operations are within five technical areas (TA), TA-I, TA-II, TA-III, TA-IV, and TA-V. An additional 9,000 acres serve as a buffer zone near the southwest boundary of KAFB. This buffer zone, leased from the State of New Mexico and Isleta Pueblo, provides margins of safety and sound buffers for SNL/NM testing activities.

In addition to the five secured TAs, SNL/NM has buildings in non-secured areas, and several remote testing areas. These remote test areas are collectively known as the Coyote Test Field and are located in the canyons on the west side of the Manzano Mountains. Several other test areas are located east and southeast of TA-III and within the canyons and foothills of the USFS withdrawn area (Arroyo del Coyote, and Lurance, Madera, and Sol se Mete Canyons). These areas are used for explosive ordnance testing, rocket firing experiments, and open burn thermal tests.

SNL/NM personnel utilize several facilities that are outside the boundaries of KAFB. The Center for Integrated Nanotechnologies, the International Programs Building, the Innovation Parkway Office Center, and the National Museum of Nuclear Science & History are all located on Eubank Boulevard Southeast within one mile of KAFB. There are many other small-scale, off-site SNL/NM projects, including the Advanced Materials Laboratory at the University of New Mexico.

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SNL/NM reports waste and recycling data for Tonopah Test Range, which is 32 miles southeast of Tonopah, Nevada, and provides technical support as requested. SNL/CA and the Kauai Test Facility are independent of SNL/NM with regards to waste and recycling reporting, though technical support is available through SNL/NM should it be requested.

2.0 Legal and Other Requirements

P2 concepts first appeared in the RCRA of 1976. An expressed concern was to minimize the generation of hazardous waste through process substitution, materials recovery, recycling, reuse, and treatment. It established the reduction or elimination of hazardous waste as national policy and required that hazardous waste generators and RCRA permit holders have a program in place to minimize waste.

The Pollution Prevention Act of 1990 expanded on RCRA, formulating the following policy, known as the waste management hierarchy, for addressing management of waste and pollutants:

> "The Congress hereby declares to be the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented or reduced should be recycled in an environmentally safe manner whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be emphasized only as a last resort and should be conducted in an environmentally safe manner."

Other key pieces of environmental legislation and directives also incorporate P2, which include selected Federal legislation or mandates and applicable DOE orders. Brief descriptions of these are provided in Appendix A and can also be found on the SNL/NM P2 websites, under "Regulatory Drivers."

DOE Order 436.1 Departmental Sustainability replaces DOE O 450.1A, Environmental Protection Program. The purpose of DOE Order 436.1 is to provide requirements for managing sustainability within the DOE to: 1) ensure the Department carries out its missions in a sustainable manner that addresses national energy security and global environmental challenges, and advances sustainable, efficient, and reliable energy for the future, 2) institute wholesale cultural change to factor sustainability and greenhouse gas reductions into all DOE corporate management decisions, and 3) ensure DOE achieves the sustainability goals established in its Strategic Sustainability Performance Plan (SSPP) pursuant to applicable laws, regulations and Executive Orders (EO), related performance scorecards, and sustainability initiatives.

This order is not within the Management and Operating Contract because the intent of the Order is currently being implemented through Sandia's requirement for ISO14001 certification.

The MSP2 Program supports the Corporate EMS and Sandia's annual Site Sustainability Plan (SSP), which is a required response to the SSPP.

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2.1   Evaluation of Compliance

Environmental Program's Subject Matter Experts (SME) are responsible for knowing and understanding federal, state, and local requirements for their program. The SMEs obtain requirement information from a variety of sources, including the Federal Registrar, Sandia's legal department, journals and periodicals, Sandia's ES&H library, the Energy Facility Contractor Group, and other means. Each environmental program completes self-assessments as prescribed by the ES&H Self-Improvement schedule, which is intended to assure that required documentation (program documents, corporate procedures, and/or operating procedures) and implementation systems have been properly developed and communicated, in accordance with applicable laws, regulations and permits, industry standards, and DOE Orders. Additionally, environmental programs may be audited for compliance by the DOE SSO, or by federal, state, or local regulatory agencies. All analysis results will be documented in the Assurance Information System (AIS) in accordance with Corporate Process: CG100.6 Assure Performance Process.

The MSP2 Program Coordinator ensures that the regulatory requirements are being met by members of the workforce through the actions listed in Table 1 – Evaluation of MSP2 Program Compliance on the next page.

2.2   Self-Assessment

Each program is assessed annually through review and revision of program plans. Additionally, formal self-assessments may be conducted according to center procedures and requirements. Independent assessments of the MSP2 Program are scheduled at least once every five years by the MSP2 Program Coordinator in coordination with the group's manager and the ES&H Self-Assessment Project Lead. The last MSP2 Program self-assessment was conducted in May 2008.

SNL/NM has an established ES&H Functional Area Self-Improvement Program. Self-assessments are required based on guidance in the Corporate Procedure: CG100.6.3 *Determine, Plan, and Perform Assessments* and conducted according to guidance in the *Environmental Programs Quality Assurance Plan*, QUA 94-06.

Self-Assessment activities include:

- Track progress of MSP2 Program Plan activities in an annual spreadsheet or chart. The MSP2 group will meet to record progress by the end of March and the end of August each FY.
- Review and revise MSP2 Program Plan activities annually.

Table 1: Evaluation of MSP2 Program Compliance

Requirement	Evaluation of Compliance	Schedule of Evaluation	Regulatory/permit or "other" requirement?	Method of evaluation	Results	POC
DOE SSPP	1. MSP2 Program Plan is aligned with the pollution prevention elements of the SSPP.	By Aug. 31 of each FY for following FY Plan	Other	The Plan is revised annually to set program activities to the MSP2 goals in the SSPP and the SSP.	Final Program Plan is reviewed by EMS Coordinator, signed and recorded as Program Document in Center 4100 Controlled Documents	Ralph Wrons
	2. Provide Objectives and Targets for inclusion in corporate EMS Manual that address environmental aspects and reduce environmental impacts and track progress.	Quarterly	Other -- according to EMS requirements	Analyze data and compile according to instructions, for particular target rate	Provided to EMS staff quarterly, as applicable	Ralph Wrons
EPA Comprehensive Procurement Guidelines (CPG) - affirmative procurement of listed recycled content products	1. Pull and review purchase data on a quarterly basis for specific vendor (JIT) contracts. CPG item percentage compliances are reviewed and evaluated after each quarterly reporting. Items with low compliance are targeted for improvement.	First month after the previous quarter of purchases	Regulatory (originally RCRA 6002, then EO 13101, then CPG)	The data is analyzed and compiled to identify qualified products, and quantitative summaries are generated for CPG compliance in each category according to instructions called "AP Reporting Procedure".	Percent of applicable product purchases meeting guidelines for recycled content or meeting one of three "justified purchases" criteria (not readily available, not cost effective, or not meeting performance requirements)	Ralph Wrons
	2. Annually review several applicable JIT contracts and communicate with the Procurement Agents to provide and amend to specific vendor contracts, requirements language to improve environmentally preferable purchasing (EPP), in addition to AP, and associated reporting.	3-4 contracts annually	Other -- good practice	Target contracts that are due for renewal and/or contracts for products with low CPG compliance	Recommendations for contracts' amended language for AP and/or EPP	Ralph Wrons

Table 1: Evaluation of MSP2 Program Compliance (concluded)

Requirement	Evaluation of Compliance	Schedule of Evaluation	Regulatory/permit or "other" requirement?	Method of evaluation	Results	POC
National Environmental Policy Act (NEPA) - reduce environmental impacts of government projects	Review projects entered into Sandia's NEPA Checklist review system, called Tracking Environmental Actions Management System (TEAMS). MSP2 opportunities are typically recycling, but also in areas of waste reduction and EPP.	Periodic, but no less than monthly	Regulatory	TEAMS Administrators assign projects for review by P2 when identified with chemicals used, and/or solid waste and/or hazardous waste generated.	As applicable, follow-up with Project owner to address MSP2 actions determined. Increasingly, project owners are proactive on appropriate recycling.	Ralph Wrons
RCRA/HSWA Permit Section B.1	Certification that a Waste Minimization program is in place for Reduction of Volume and Toxicity of Hazardous and Mixed Waste	By Dec. 1 for preceding FY	Permit	According to AOP #95-45 Rev 08 "Review and Approval of Regulatory Deliverables"	Signed by VP and copies are placed at Sandia Waste Management facilities, e.g., HWMF & RMWMF	Ralph Wrons
42 USC § 13101 et. seq., Pollution Prevention Act of 1990	Provide evidence of following the waste management hierarchy of Reduce, Reuse, Recycle, Treatment, Disposal	Monthly	Regulatory	Document in monthly reports efforts to provide technical assistance to reduce and reuse before recycle and recycle before disposal	Documented in monthly reports	Ralph Wrons

2.3   Records Management and Document Control

Documentation to support Sandia's EMS is comprised of both EMS-specific and general corporate and site documents and information sources. Sandia manages all information created by Sandia work in accordance with Corporate Policy: IM100 Information Management & Cyber Security. To assist the workforce with the requirements for managing information, Sandia developed a Records Management Manual. Sandia's Customer Funded Records Center is the depository for all records generated by ES&H.

Document Control for the MSP2 Program follows guidance provided in the Environmental Programs Quality Assurance Plan, QUA 94-06. Documents submitted to external regulators or for public release follow the process described in Review and Approval (R&A), and the ES&H and Emergency Management Document Control Administrative Operating Procedure, AOP 09-11. Guidance for performing general Environmental Programs Department tasks (i.e., calibration of equipment, monitoring, sampling, and data quality objectives) are described in QUA 94-06 and Work Planning and Control, AOP 09-10. Additional instructions for MSP2 Program processes are contained in program-specific technical work documents, plans, and procedures.

Work Planning and Control activities include:

- Maintain the P2 Primary Hazard Screening (PHS) and Lead Bank PHS,
- Implement Work Planning & Control for activities under the P2 and Lead Bank PHSs.

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3.0 MSP2 Organization & Structure

3.1 MSP2 Staff

The MSP2 Program staff consists of Sandia and contractor professionals with expertise in waste reduction and resource conservation strategies, practices, and technologies.

The lead for the MSP2 staff is designated as the site MSP2 Program Coordinator and is regarded as the MSP2 SME. The MSP2 Program Coordinator is responsible for managing all MSP2 activities and, as an SME, is also responsible for routinely assessing regulatory requirements for relevance and applicability to their environmental program.

MSP2 staff members provide the following services:

- Specific division support to ES&H programs and division coordinators, EMS activities and direct support to line customers,
- Operational assessments to include product reviews, waste minimization audits, Construction and Demolition (C&D) project review, Pollution Prevention Opportunity Assessments, Lean/Six Sigma (LSS) event support, and other methodologies, based on line owner's preference,
- Researching potential product substitutions, process changes, and green purchasing alternatives that result in resource conservation and the reduction or elimination of hazardous and toxic chemicals use and resultant waste,
- Cost-benefit analyses for MSP2 opportunities,
- Identification of site-wide recycling opportunities and improvement and coordination of recycling efforts,
- Recognition of organizations' environmental accomplishments,
- Promote awareness of MSP2 activities and resources through channels such as the internal and external websites, and participate in outreach efforts to local and Federal communities,
- Tracking and reporting site progress with Sustainable Acquisition (SA) including, green labeled, recycled content, biobased products and Electronic Product Environmental Assessment Tool (EPEAT) registered electronics,
- Tracking waste generation, compiling information and providing reports to DOE, State and Federal regulatory agencies, Sandia, and line organizations.

The MSP2 field technician is assigned to support hands-on recycling processes not maintained by other organizations. A team vehicle is used to transport materials for reuse and recycle, and two sprung structures in TA-II are the primary locations through which materials are processed.

If the opportunity arises, MSP2 would be willing to mentor a high school student for the summer to research water savings achieved through recycling processes over virgin material manufacturing processes. Other topics of importance may come up as research opportunities too.

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3.2   Training

Corporate trainings are managed through Sandia's Corporate Learning and Professional Development and tracked using Sandia's [Training and Employee Development System (TEDS)](#). Corporate-wide required trainings are automatically populated in TEDS. Specific job-related training requirements are determined by managers or through the PHS process. Managers are responsible for ensuring that all training requirements (corporate and organizational) and completions are input into TEDS.

The MSP2 Program seeks out low-cost training opportunities to improve MSP2 staff knowledge on MSP2 strategies, practices, and technologies. Examples are the annual Federal GreenGov Conference and regional MSP2 conferences specific to recycling and green purchasing. Training budget is also leveraged by taking advantage of relevant, locally available courses, and workshops.

3.3   Sustainability Partners

The MSP2 staff interacts with many SNL/NM organizations to implement the requirements of the MSP2 Program in support of its vision and mission. The function of each of these organizations and relationship to the MSP2 Program is described below.

3.3.1 Line Organizations

The line organization is the key functional unit for the implementation of MSP2 opportunities, as well as ES&H requirements. Line organizations, with assistance from their ES&H Coordinator, their Environmental Compliance Coordinator (ECC), and the MSP2 staff, are responsible for:

- Reviewing operating practices to identify areas of improvement, and
- Evaluating and implementing cost-effective, alternative practices to reduce pollution, conserve resources, maximize recycling, and purchase environmentally preferred products.

3.3.2 ES&H Coordinators

ES&H Coordinators represent Sandia divisions and centers. They assist their organizations in implementing and complying with all applicable ES&H programs and regulations. The ES&H Coordinators are responsible for disseminating information, and representing the interests of their individual organization. They communicate MSP2 initiatives to line organizations.

3.3.3 Environmental Compliance Coordinators

ECCs are environmental professionals whose function is to advise and assist line organizations with environmental issues to ensure regulatory compliance. The ECCs work closely with ES&H coordinators, line staff, and other ES&H professionals to identify MSP2 opportunities for the identification and resolution of environmental issues. MSP2 works with the Environmental Programs Department to incorporate appropriate language on MSP2 requirements or opportunities in [Corporate Procedure ESH100.2.ENV.22: *Manage Hazardous Waste at SNL/NM*](#).

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3.3.4 Environmental Management System

The EMS is a continuing cycle of planning, implementing, evaluating, and improving processes to achieve environmental goals. Sandia's EMS provides an integrated approach for management and Members of the Workforce (MOW) to identify and manage environmental risks. MSP2 is a technical arm of the EMS program, assisting with implementation of Division goals that align with MSP2 goals including waste prevention, toxic material reduction, SA and recycling.

3.3.5 Waste Management and Pollution Prevention

Combining the MSP2 group with Solid Waste, Hazardous Waste and Radioactive and Mixed Waste Management personnel, this department provides guidance and assistance in waste reduction and diversion and exemplary service in collection, storage, treatment, packaging, shipping, disposal, policy communication, and training. The goal is to support the Laboratories' programs in proactively meeting the waste management hierarchy through close collaboration and regular communication.

This department operates three facilities: the Hazardous Waste Management Facility (HWMF), the Radioactive and Mixed Waste Management Facility (RMWMF) and the Solid Waste Collection and Recycling Center (SWCRC). MSP2 interfaces with personnel at the SWCRC to improve recycling effectiveness and recycling awareness. Collaboration with the HWMF and SWCRC team supervisors includes identification of recycling and other waste reduction opportunities. Data from each of these are used by MSP2 to complete many required reports.

3.3.6 Environmental Programs SMEs

Sandia employs environmental professionals with expertise in environmental regulations, e.g., air quality, wastewater, storm water, etc. The MSP2 staff works with these SMEs to ensure that MSP2 projects and activities are implemented in full compliance with applicable regulations and to provide positive impact to regulatory requirements, permitted conditions, and other applicable permitting incentives.

3.3.7 Procurement

Supplies and services at Sandia sites can be procured by one of the following methods: Just-in-Time (JIT) contracts, purchase requisitions, and credit cards. Contractors may also bring in and use materials to complete the scope of their work. Each of these purchases is subject to the SA requirements for applicable categories. Sandia's procurement, as directed in the prime contract, is responsible for:

- Providing support to activities that reduce procurement of toxic and hazardous materials,
- Implementing an Affirmative Procurement (AP) program for U.S. Environmental Protection Agency (EPA) designated products that have a post-consumer recycled content,
- Implementing the U.S. Department of Agriculture (USDA) Federal BioPreferred Procurement Program,
- Giving preference to green label products and product alternatives with otherwise reduced environmental impacts and closed-loop procurement contracts, and

- Placing requirements to purchase of EPEAT registered products into electronic office equipment procurement contracts.

P2 works with Procurement on the above issues and assists them to develop language for new and existing contracts to ensure that purchases give preference to sustainably produced products and include life cycle environmental assessment where possible.

3.3.8 Facilities Management & Operations

The management, operations, and maintenance of existing buildings and utilities; planning, designing, modifying, and constructing new buildings; demolishing substandard structures; and providing site services is essential to Sandia operations. The Facilities Management and Operations Center carries out these functions. MSP2 staff works with Facilities counterparts in the following areas:

- Reducing and recycling of C&D debris,
- Sustainable acquisition,
- Materials sustainability in site maintenance practices (grounds, roads, painting), and
- Review and revision to construction specifications to incorporate sustainable materials/practices.

P2 shares the southern portion of the Facilities soil borrow site located at the south end of SNL/NM's Tech Area III. This 7.5 acre site opened in June 2006 and serves as an accumulation area for the collection of concrete and asphalt debris from the various Facilities C&D projects conducted each year. Approximately every other year, the debris is crushed into reusable product for Facilities infrastructure projects. There is a Field Operating Procedure (FOP08-01) associated with this Concrete and Asphalt Recycling Area (CARA) and is available from the Center 4100 Controlled Documents website.

3.3.9 Fleet Maintenance

The Fleet Services Department operates the Motor Pool Complex where they perform preventative, predictive, and corrective maintenance activities on vehicles, forklifts, heavy equipment, and carts controlled by Sandia. Fleet Services coordinates the use and preventative maintenance of all General Services Administration vehicles, which are serviced off-site at commercial automotive repair shops. MSP2 provides Fleet Services with technical support regarding sustainable practices and products.

3.3.10 Reutilization & Disposition

The Reutilization & Disposition organization under Logistics Operations is responsible for the management of property-numbered equipment (property), surplus material from line organizations, scrap metal, and Residue Material and Equipment (RME). RME is any material or equipment made surplus from a construction project, which can be sold via authorized auction or is recycled.

The MSP2 staff works with Reutilization & Disposition to:

- Coordinate the staging of scrap metal recycling containers for C&D projects;
- Coordinate the staging of electronics scrap for periodic recycling shipments;

- Maximize reuse and recycling opportunities with the surplus material sent to Reutilization and Disposition; and
- Collect reuse and recycling data.

A memorandum of understanding (signed June 2007) exists between MSP2 and Reutilization that focuses on the MSP2 recycling tent and associated recycling processes, and is currently in revision. Specific actions and responsibilities are documented in the Recycling Operations at the Reutilization Services Yard, AOP 10-05, for excess electronic products, office supplies, scrap metal, carpet tile, ceiling tile, and other materials, with process checklists.

3.3.11 Environmental Life-cycle Management

The Environmental Life-cycle Management (ELM) mission ensures long-term protection of human health and the environment and proactive management toward sustainable use and protection of natural and cultural resources affected by SNL/NM operations and operational legacies. This mission will be accomplished by working with the line and support organizations in proactively identifying potential environmental impacts and applying environmental processes and guidance.

3.3.12 Chemical Exchange Program

The Chemical Exchange Program (CEP) coordinates the exchange of chemicals at Sandia. Chemical owners submit unneeded chemicals for exchange and other researchers needing specific chemicals can browse the list of available chemicals and request those chemicals of interest free of charge. Once a needed chemical is identified, the transportation of the chemical to the laboratory where it is needed is arranged by the CEP. MSP2 supports the CEP by encouraging its use among MOW by virtue of a link to the CEP website from the P2 "SNL Freestore" website.

3.3.13 Industrial Hygiene

Industrial Hygiene (IH) coordinates a review, including MSP2, of new chemical-based products by Facilities organizations, on an as-needed basis, for the purpose of ensuring their environmental compliance, fire hazard assessments and MSP2 consideration.

3.4 Relationship with DOE SSO

The DOE SSO administers the Sandia contract and oversees Sandia operations at SNL/NM. Sandia and DOE work together in a cost-effective and timely manner utilizing best management practices to ensure regulatory compliance and the protection of human health and the environment.

Sandia and DOE facilitate communications through periodic meetings on the status of the MSP2 Program performance. SSO's MSP2 Program point of contact (POC) is invited to periodic MSP2 Program meetings to discuss activities, successes, and potential issues.

SSO is the external POC whose roles include:

- Interfacing with the EPA,
- Communicating with the public,

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- Making decisions and setting policy which obligates DOE, and
- Providing oversight to Sandia's MSP2 Program.

All documents and materials shared with the DOE/SSO must be either approved for release using the Record of Organizational or Programmatic Review for Information Release form SF 1008-RAO for non-public purposes, or submitted to the corporate R&A process for public release. Utilizing the "Environmental Programs" Designated Unclassified Subject Area (DUSA) is an efficient way to navigate the corporate R&A process.

4.0   P2 Program Implementation

Sandia's EMS is implemented through the site ISMS which provides a unified strategy for the management of resources; the control and attenuation of risks; and the establishment and achievement of ES&H goals. The EMS/ISMS model involves a "Plan-Do-Check-Act" methodology of continuous improvement.

The MSP2 Program conducts its activities following the guidance in how to integrate EMS elements into the existing ISMS. The four major phases of this implementation are:

1. Planning and Aspects Identification,
2. Implementation and Operation,
3. Verification and Corrective Action, and
4. Management Review and System Maintenance.

The MSP2 Program conducts specific activities aligned with the goals established in the DOE SSPP. This section describes the annual objectives, targets, and activities planned for each of these focus areas. Planned activities are listed in a bulleted format for each focus area. The goals of all activities are to optimize processes, reduce environmental hazards, conserve environmental resources, minimize life-cycle cost and liabilities, and strive for environmental sustainability.

4.1   Technical Assistance

Opportunities for integrating MSP2 into laboratory operations are via direct technical assistance and customized guidance or support.

- Integrate environmental considerations and metrics into the corporate LSS Program to bridge the gap between EMS and LSS continuous improvement activities.
  - o MSP2 staff to serve as SMEs on environmental wastes.
- Support Division ES&H Coordinator meetings and EMS targets.
  - o Present quarterly waste generation information, with summary charts.
  - o Prepare ideas for new division-specific EMS goals, and methods for achieving existing goals.
- Continue to support and participate as MSP2 project reviewer for the Tracking Environmental Actions Management System (TEAMS) process to identify MSP2 actions in projects seeking National Environmental Policy Act (NEPA) approval.

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4.2   Waste Minimization

Waste minimization will be accomplished by reducing or eliminating the generation of wastes and other pollutants at the source, including segregation, substitution, and reuse of materials that could otherwise create future environmental legacies.

- Plan activities with respect to capturing documentation for the biennial report
  - Update the Waste Minimization Library SharePoint with recent EMS nominations
- Seek to alter PHS software warning #2 into an actual waste minimization question
- Add a waste minimization clause to Corporate Procedure ESH100.2.GEN.3 *Develop and Use Technical Work Documents* in support of the waste management hierarchy requirements in Corporate Procedure ESH100.2.ENV.22.
- Identify activities to continue efforts for printing paper reduction
- Provide cross-training/familiarization on Waste Generation reports for MSP2 Staff and other groups as needed.

4.2.1 Zero Waste to the Landfill by 2025
- Complete and begin implementation of the Zero Waste Marketing Plan.
- Outline a long term Zero Waste Strategic Plan.
- Develop and screen the first of a Zero Waste series of video shorts for awareness and motivation on reduce, reuse, recycle and buy green messages -- to be posted on internal and perhaps external websites.
- Continue to support large catering events with Zero Waste Lunch Events utilizing compostable supplies, recycled content paper plates, and team-managed waste/recycle/compost "Zero Waste Stations".
  - Implement 2012 brainstorm meeting ideas for a more successful 2013 season.

4.2.2 Hazardous and Chemical Waste
- Work with the HWMF to further develop the remaining actions of the FY11 updated process improvement work plan that identified more environmentally beneficial disposition options for:
  - Ethylene/propylene glycols,
  - Shipping uncrushed fluorescent light tubes, and
  - Rechargeable batteries.
- Evaluate regulatory and vendor requirements for recycling thermal batteries.
- Per FY09 Recycling Opportunity Assessment (ROA), work with the HWMF to evaluate the downstream recyclers of hazardous materials to assure proper handling and treatment, while minimizing material exporting and maximizing potential revenue application.
  - Review and address hazardous materials for diversion in the FY09 ROA in Section 3.4, especially regarding Fleet Services-generated wastes.
- Beryllium-contaminated material continues to be the highest State-regulated waste stream (D1000 & D2000). Applicable MSP2 staff shall:

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- o Review *Corporate Procedure: ESH100.2.IH.24 Manage and Control Beryllium Exposures* and understand beryllium contamination, decontamination, and its disposal process impacts, and
- o Participate in training course BEA100 Beryllium Awareness.
- o Seek to incorporate specific language about minimization of beryllium contamination in applicable technical work documents
- o Research and seek to establish a defensible position that allows the recycling of certain beryllium-contaminated materials.

4.2.3 Toxic and Hazardous Chemicals

These activities will eliminate or minimize the acquisition, use, and any associated release of toxic and hazardous chemicals and materials that would otherwise require control, treatment, monitoring, and reporting. Mercury and lead are specifically addressed that SNL/NM has higher than threshold reportable quantities as determined by the Toxic Release Inventory (TRI) through the Air Quality Program.

4.2.3.1   Chemical Inventory Management

- Utilize MSP2 staff experience with the Chemical Information System and Waste Information Management System (WIMS) database to produce useful reports for Division ES&H/EMS teams and individual lab owners.
- Promote the CEP as a method to reduce both chemical purchases and existing chemical inventories.
- Support the Air Quality team regarding the capture and reuse of sulfur hexafluoride (SF6).

4.2.3.2   Lead

- Revise *Corporate Procedure ESH100.2.ENV.8 Manage Excess Metallic Lead*,
- Maintain Lead Bank PHS, FOP06-04, and NEPA,
- Complete work planning and controls documentation,
- Inventory reusable stock, cover with dust shields, and recycle any scrap,
- Identify environmentally compliant local recycling vendor,
- Document the cost savings of the Lead Bank in a spreadsheet that can be annually updated,
- Implement an awareness effort to increase Lead Bank utilization, and
- Investigate trading brick inventory for epoxy-coated bricks.

4.2.3.3   Mercury

Utilizing the FY09 Assessment of Mercury Reduction at SNL/NM:

- Identify SNL/NM's reported status in the toxic release inventory,
- Compare the current chemical inventory of mercury to 2008 baseline,
- Update table for mercury-containing items waste trend, and
- Identify logical activities from the results of these steps.

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4.3   Sustainable Acquisition

SA includes products containing recycled and biobased content, other identified environmentally preferable attributes, and 3rd party certified green labels. Working with Procurement, Fleet, Facilities, and line organizations, the following activities are intended to institutionalize SA and to meet the SSPP goal that 95% of all new contract actions include appropriate SA requirements.

- Put in place SA language in Supply Chain Management Policy, Processes, and Procedures (P/P/P) in order to establish unequivocal guidance for procurement. Contingent upon this occurring:
  o Work with Corporate and Strategic Purchasing to update/include SA language in new and existing JIT contracts.
  o Identify and work with other affected Procurement areas that need attention, e.g., Section II language that would address the "95% requirement."
  o Work with Facilities POCs to amend Purchase Orders, specifications, and design manual to require Energy Star, Federal Energy Management Program (FEMP), and WaterSense® products as applicable.
- Pursue 100% compliance with EPA's Comprehensive Procurement Guidelines (CPG):
  o Improve reporting on copy paper and packaging contracts to include specific environmental product attributes, and seek ways to reduce printing paper use.
  o Update construction reporting to more comprehensively capture applicable product purchases.
  o Create an awareness flyer to provide prospective suppliers to SNL explaining SA goals.
- Purchase products listed in the USDA BioPreferred Program adopted for compliance by the DOE:
  ○ Continue implementation of biobased and other product substitutions at Facilities maintenance warehouse, Fleet services; see reporting requirements in Section 4.7.
  ○ Confirm biobased shredder oil is the primary purchase option for SNL/NM site.
- Establish contractual recycling guidelines for contractors generating waste onsite (e.g., carpet, furniture) via Construction Specifications.
- Be flexible to address opportunities for improving provision of, and/or reporting of, environmentally preferable products not identified in this Program Plan. Record as needed.

4.4   Electronics Stewardship

Lifecycle management of electronic equipment aimed at minimizing the economic and environmental impacts of ownership (procurement, operations, end-of-life disposition).

- Procurement:
  ○ Ensure EPEAT-qualified purchase for desktops, laptops, monitors, thin clients, and any other equipment added to the EPEAT registry.
  o Create reporting mechanism to gather data on environmental attributes of SNL/NM-purchased televisions, wireless, and imaging equipment.

- o Address difference in procurement for desktop computers between FEMP and Energy Star (low power stand-by) and IE NightWatchman application of greater power savings.
  - o Work with Procurement to establish requirements for FEMP designated servers.
- Operations:
  - o Promote transition from desktop/networked printers to networked copiers for printing faxing, and scanning.
  - o Work with Procurement and Computer Support Services to establish rules for desktop printer purchase limiting model availability and ultimately overall purchases.
- End of Life:
  - o Pursue reuse and/or donation for excess electronic equipment per Federal Electronics Challenge (FEC) definition.
  - o Develop a Corporate Process with Property Management regarding excess high performance computer components reuse/resale. Involve all potentially interested parties such as Cyber Security, Operational Security (OPSEC), and previous owners.
  - o Stay involved with solving concerns regarding hard drives and batteries for ultrathin computer disassembly and recycling with participation of the vendors.
  - o Pursue diverting all network routers from auction to mixed electronics recycling.
  - o Investigate and pilot a new recycle vendor for office electronics
- Continue participation in the FEC and maintain FEC-Gold level status with aim of seeking FEC-Platinum recognition.

4.5 Recycling of Solid Waste

These activities will encourage recycling of solid waste by diverting materials, suitable for reuse and/or recycling, from landfills, thereby minimizing the economic and environmental impacts of waste disposal, and long-term monitoring and surveillance. The MSP2 Staff assists in implementing, maintaining and improving comprehensive and effective programs for reuse and recycling of wastes.

- Continue usage of the new Solid Waste and Recycling Information Management System to track all SWCRC and MSP2 materials being shipped for recycle, and improve reporting capabilities.
  - o Automate KAFB Monthly Reports
- Direct support to Corporate EMS target:
  - o Divert 75 percent of non-hazardous solid waste, i.e., that which can be disposed in landfill (excluding C&D debris) by the end of FY14.
- Support recycling targets established in annual Division EMS Action Plans.
- Assist the SWCRC to improve customer service and tracking of requests through implementation of web-based software with the help of the Center 4100 software development team.
- Seek to instigate the recycling of many materials from:
  - o TA-IV Limited Area eastern laydown yard, and
  - o Environmental Restoration (ER) Site 18 in TA-III.

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- Support the maintenance and operation of existing recycle streams as needed.
- Install automatic lid closing bars on all slant-topped cardboard and mixed paper recycling dumpsters to reduce material loss to wind and collection of storm water.
  - Research sliding lids to reduce the need for lifting of lids
  - Seek to instigate angle iron bumpers on dumpsters from vendors
- Pursue additional dumpster enclosure construction or expansion with Facilities, starting with expanding Building 858EL for mixed paper.
- Establish a process for conducting and documenting site visits or audits of recycling vendors receiving material from SNL/NM.
  - Develop the audit template
  - Document in Enterprise Information Management Services (EIMS) FileNet
  - Standardize the process with the HWMF
- Update the Material Recycling Assessment spreadsheet for current status and current MSP2 Staff personnel, as applicable.
- Support the SWCRC in the development of an FOP for recycling activities performed by the MSP2 field technician, but managed through the SWCRC labor contract.
- Collaborate where possible with KAFB and other Federal entities on waste recycling.

4.5.1 Recycling Opportunity Assessment
- Review and update the FY09 ROA.

4.5.2 Office Recycling
- Using SNL/NM's Leadership in Energy and Environmental Design (LEED)-certified buildings, develop a basic set of criteria for an optimum building recycling set-up (e.g., typical material segregation, bins, signage, POCs, additional recyclables).
  - Implement in one of earliest LEED buildings, possibly building 899.
  - Implement in newest IGPP seeking LEED Gold, building 704.
  - Seek to instigate the inclusion of criteria into the Facilities Design Manual.
- Evaluate expanding the FY12 pilot with Custodial and their management on collection of mixed paper recycling bins with solid waste removal.
  - Identify funds to procure the minimum 50 rolling carts
  - Identify specific buildings or tech areas for expansion
- Evaluate consolidation of multiple sensitive paper collection and destruction processes (e.g. Bunkers, 6000 Igloos, Logistics Destruction Bags, and SWCRC).
- Support the collection and segregation of packing foams at the SWCRC.

4.5.3 Reutilization & P2 Tent
- Work with Reutilization to improve equipment and material reuse and recycling,
- Migrate all non-Reutilization oriented material streams to new MSP2 Sprung,
- Maintain and expand usage of the Toner Exchange Program,
  - Work to improve online inventory through Division 6000 reuse website
  - Advertise at least once per quarter
- Maintain and expand usage of the Binder Exchange Program,
  - Find out binder purchasing trend roughly 2007-2012

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o   Evaluate the value of the Binder Exchange Program
o   Evaluate a recycle pathway for binders, such as Ace Metals
o   Reduce the inventory
o   Communicate regarding the Binder Reuse Areas.

4.5.4 C&D Waste Recycling

- Continue to support implementation of standard construction specification 01505, Construction Waste Management:
  o   Be proactive on waste characterization of new, large renovation or demolition projects for reuse or recycling potential.
  o   Work with contractors to facilitate construction waste recycling and reporting.
  o   Coordinate activities between construction contractors, recycling vendors, the SWCRC, and Reutilization.
  o   Collaborate with Facilities project managers and contractors to develop methodology for Construction Waste Estimating that utilizes construction bidding "takeoff sheets".
- Supply technical support and conduct awareness training for the C&D Recycle Center.
- Work with Facilities Roads & Grounds services to divert pallets from landfill for reuse.
- Provide logistical support for Facilities, contractors, and recycling vendor to recycle roofing membranes (as needed).
- Identify reuse applications for carpet throughout SNL/NM.
- SNL/NM use of KAFB C&D waste landfill:
  o   Explore possibility of instituting cost-neutral landfill tipping fee to Construction Contractors, improving the incentive for recycling over disposal.
- Work with EMS staff to review and revise Sandia Construction Specifications and contractual documents to incorporate SA, Zero Waste, and recycling practices.

4.5.5 Scrap Metal

- Team with Property Management regarding the diversion, recovery and tracking of precious metals for data collection.
  o   Seek to instigate recovery and recycling of pastes, instead of disposition as hazardous waste.
- Interface with Reutilization scrap metal contract Sandia Delegated Representative (SDR) on the deployment and tracking of C&D scrap metal roll-off bins.
- Support the rebid of the Reutilization scrap metal contract.
- Improve efficiency of small quantity scrap metal recycling and segregation:
  o   Work with routine generators (buildings/areas and contacts),
  o   Label bins and input locations into Recycling Geographic Information System (GIS),
  o   Establish location-specific processes to maintain metal segregation,
  o   Work with Reutilization to maintain segregation.
- Investigate the feasibility of reducing radiological screening procedures for Logistics-handled scrap metal hoppers.

4.5.6 Decontamination and Demolition

- Provide support to Decontamination & Demolition Program projects through identification of opportunities to reduce, reuse, and recycle deconstruction waste.
- Attend Facilities Assessment Decontamination and Demolition Oversight Committee (FADDOC) meetings.

4.5.7 Concrete and Asphalt Recycling Area

- Promote and support use of the CARA to concrete and asphalt debris generators,
- Provide oversight to CARA operations and maintenance,
- Modify existing Statement of Work with PG Enterprises to include the use of a CEMCO VSI crusher for crushing of Solar Tower Glass. Anticipated use is for crushed concrete base course and glass cullet mix (due by 3/15/2013).
  - Work with IH and Safety.
- Identify a recycling, donation or auction option for concrete pavers accumulated and stored at the CARA.
- Identify end-users for existing crushed material and secure commitment to use for dust control on remote area dirt roads, base course for roadway reconstruction, water dissipation for Storm Water control and ER projects, and track-off pad replacement.
- Evaluate adding "concrete" and "asphalt" to contractor signage on road to KAFB landfill.
- Establish Long Range Development Plan to institutionalize the recurring use of crushed concrete and asphalt products throughout SNL/NM's infrastructure and develop a timeline that will coincide with the production of recycled materials.
  - Emphasize growing need to rely more on sustainable material such as recycled aggregates vs. virgin aggregates that will ultimately reduce initial purchase costs, routine maintenance costs, chemical suppressants, in addition to extending the longevity of roadways.
- Coordinate crushing of the material on a two-year cycle.

4.5.8 Composting

- Support and expand dining facilities' composting processes (food waste and paper),
- Support and improve pulverized paper composting process,
- Support and expand Grounds & Roads Services composting processes,
  - Evaluate onsite composting of materials
- Establish a rolloff at the SWCRC for composting of plywood or engineered wood products,
- Support gypsum composting from new construction, and
- Support the remediation of a TA-III borrow site with compost from the Albuquerque and Bernalillo County Soil Amendment Facility.

4.5.9 Recycling GIS

- Populate layers with scrap metal tilt-hoppers, removable electronic media collection bins, and white paper recycling carts,
- Provide real-time mapping files for recycling on Techweb,
- Utilize a route planning tool or consultant proposal for solid waste and recycling operations,

- Evaluate the need for multi-layer portable document format (PDF) of dumpster locations, and
- Provide cross-training/familiarization for MSP2 Staff.

4.5.10 Reinvestment of Recycling Revenues

- Prepare and maintain annual Recycling Revenues Project/Task tracking and planning budget spreadsheet, revising at least monthly. Anticipated major investments include:
    - Complete TA-II Sprung installation, including concrete pads,
    - Perform glass and concrete crushing operations at the CARA,
    - Purchase of six new cardboard dumpsters,
    - Purchase a loading ramp, and
    - Potentially meet budget shortfall of up to $120,000 in labor (partial for SWCRC and MSP2 staff).

4.6 Awareness and Outreach

Awareness activities are used to inform the public and the Sandia workforce about the benefits of environmental sustainability and MSP2 as well as to reward and encourage Sandia personnel and organizations that create and/or participate in environmentally sustainable practices.

- Submit MSP2 award nominations (e.g., DOE, FEC, WasteWise, GreenGov, and others).
- Assist line organizations to submit nominations for annual EMS Environmental Excellence Awards.
- Update Reduce, Reuse, Recycle factsheets for new hire orientation,
- Publicize MSP2 tips during National P2 Week (3rd week of September).
- Attend and/or present technical papers at workshops and conferences as possible.
- Maintain internal and external P2 websites:
    - Provide one or two stories per year to external news website
    - Participate in Sandia's corporate social networking ventures
- Participate in Earth Day and other EMS coordinated events.
- Deploy "When this bin is full, you've saved…" labels to indoor and outdoor recycle containers.
- With senior management, explore holding household non-hazardous waste recycling events

4.7 Data Analysis and Reporting

The collection, analysis, and reporting of waste generation, recycling, and SA data is a key function of the Sandia MSP2 Program. Specific reports are detailed in Section 5.0.

Data Analysis and Reporting activities include:

- Maintain formal, routine quality assurance review of all data and reports.
- Improve ease and accuracy of reporting of SA data:
    - Work with Procurement and Oracle purchasing personnel and management to improve identification of SA products at time of purchase.

- ○ Develop means to quarterly capture and record new contract actions that have SA opportunity, to meet new reporting requirements in Pollution Prevention Tracking and Reporting System (PPTRS) reporting.
- ○ Continue improvements to SA reporting from suppliers already providing customized reports.
- Improve efforts to report on DOE Priority Products (as listed in PPTRS) purchasing.
- Continue improvements to EPEAT reporting from suppliers already providing customized reports.
- Post quarterly Waste Chargeback reports on the internal P2 websites and notify distribution list.
- Compile quarterly data to the EPA WasteWise Program and provide annual WasteWise report (due March 31, 2013).
- Provide requested activity reports to management.

5.0 Reporting

Below is a summary of the Sandia MSP2 reporting requirements.

5.1 Annual MSP2 Performance Reporting to DOE

DOE Headquarters (HQ) requires that each site prepare an annual report on its waste generation and recycling, SA and electronics stewardship for the previous FY. The MSP2 staff collects and compiles the information, completing the web-based data entry on the DOE PPTRS, reviewing the report with DOE/SSO for approval and then final submittal to DOE HQ. Some requested data, such as greenhouse gas emissions, are tracked and submitted by other programs at Sandia. The data submittal is due by the end of November.

- MSP2 collects and compiles the data quarterly and follows procedures for each category in order to assure data quality for official reporting and for trending purposes. These procedures are maintained on the MSP2 Program shared directory on one of Sandia's corporate computing servers.

MSP2 also reports on annual site environmental sustainability accomplishments to PPTRS by submitting nominations to the DOE P2 Awards nomination process.

5.2 RCRA Waste Minimization Certification

Per the RCRA and Hazardous and Solid Waste Amendments permits issued, Sandia is required, per Section B.1, to certify annually that it has a program in place to reduce the quantity and toxicity of hazardous wastes generated in compliance with EPA guidance. The MSP2 staff is responsible for ensuring this certification is completed and provided to the Environmental Programs Department to be filed in the operating records of the permitted facilities.

SNL/NM submits this certification by December 1 for the previous FY and it must be signed by a Sandia officer (i.e., Vice President or higher) and the DOE/SSO Manager.

5.3   RCRA Biennial Report

Sandia is required by RCRA to report the hazardous waste generated, treated, disposed, and minimized by the facility. The report is submitted biennially by March 1 of even-numbered years to the New Mexico Environment Department. The MSP2 staff provides the documentation of waste minimization efforts and results for the RCRA Biennial report.

5.4   EPA's WasteWise Program

The EPA's WasteWise Program is a voluntary partnership program to help businesses and institutions find practical methods for reducing solid waste. The MSP2 Program joined WasteWise in 1997 to demonstrate SNL/NM's commitment to implementing waste reduction activities. WasteWise focuses on three areas: waste prevention, recycling collection, and buying or manufacturing recycled-content products. As a WasteWise partner, SNL/NM submits an annual report documenting waste reduction efforts in the three focus areas. In addition, MSP2 annually seeks to submit award applications to the EPA for recognition from WasteWise.

5.5   Annual Site Environmental Report

Per DOE Order 231.1A Chg. 1, *Environment, Safety and Health Reporting*, Sandia is required to prepare an annual site environmental report that describes all environmental releases, environmental monitoring activities, significant environmental compliance programs, and waste management programs. The MSP2 Program staff is responsible for preparing and submitting the portions of the report relevant to MSP2 including accomplishments in waste reduction, awareness, SA, reuse/recycling, and awards as well as waste generation and recycling data. Each program submittal is due by the end of February for the previous calendar year.

5.6   Waste Generation and Chargeback Reports

The MSP2 staff provides quarterly reports to division ES&H Coordinators and ECCs. The quarterly reports are posted on the internal P2 website.

The reports are based on WIMS data and contain charts showing trends in waste generation volumes and chargeback values for each division. This information enables line organizations to identify sources of waste and to work with generators to analyze how to reduce waste generation and associated costs. A summary is also provided that contains the waste category types and a sum of the total quantities of waste generated and recycled during the quarter.

5.7   MSP2 Progress Reports

The MSP2 staff compiles monthly MSP2 progress reports and the MSP2 Program Coordinator provides highlights to DOE/SSO that describe the recent activities of the MSP2 Program.

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Appendix A – Regulatory Framework for MSP2

FEDERAL LAWS

The Pollution Prevention Act of 1990 establishes a national policy for P2 and introduces what is known as the Waste Management hierarchy. The hierarchy requires facilities to prevent pollution at the source whenever feasible, followed by reuse/recycle, then treatment, and compliant disposal as the last resort. It established an EPA P2 office and national P2 Program.

NEPA requires the consideration of options to reduce environmental impacts, including P2, for governmental projects.

RCRA established a cradle-to-grave management framework and a regulatory system for solid waste. Waste generators must have a waste minimization program in place that reduces volume and toxicity of waste.

Another section of the act (RCRA 6002) requires procurement of products that contain recycled-content or recovered materials. EPA's CPG program is authorized by Congress under RCRA 6002 and by EO 13101, since superseded by EO 13423. The CPG is the driver for Sandia's AP (buy recycled content) requirements.

EXECUTIVE ORDER

EO 13514, Federal Leadership in Environmental, Energy, and Economic Performance, was signed October 2009. Implementation of the EO will focus on integrating achievement of sustainability goals with agency mission and strategic planning to optimize performance and minimize implementation costs. EO 13514 strengthened and added to EO 13423.

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