



Permit



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Mr. David Cobrain  
State of New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6303

Reference: Work Assignment No. 06280.170.0002; State of New Mexico Environment Department, Santa Fe, New Mexico; General Permit Support Contract; Hazardous Waste Permit (draft), Part 3: Storage in Containers dated November 20, 2006; Los Alamos National Laboratory, Los Alamos, New Mexico; Draft Deliverable

Dear Mr. Cobrain:

Enclosed please find the deliverable for the above-referenced work assignment. The deliverable consists of a Hazardous Waste Permit (draft) Part 3: Storage in Containers dated November 20, 2006 (electronic tracked version).

This letter deliverable is e-mailed to you on April 20, 2007 at David.Cobrain@state.nm.us and to Mr. Steve Pullen at pullen.steve@state.nm.us. A formalized hard (paper) copy of this letter deliverable will be sent via mail. If you have any questions, please call me at (214) 572-0087.

Sincerely,

Mandy Ford  
Senior Staff Consultant

Enclosure

cc: Mr. Steve Pullen, NMED  
Ms. Jasmine Schliesmann-Merkle, TechLaw, Inc.  
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1 **PART 3 : STORAGE IN CONTAINERS**

2 **3.1 GENERAL DESCRIPTION**

3 Part 3 specifies the regulatory requirements that the Permittees shall follow when storing  
4 hazardous and mixed waste (includes mixed low level and mixed TRU waste) at container  
5 storage areas at the facility. The Permittees are authorized to store only those wastes listed in  
6 Part A of the Permit Application, Permit Attachment C (*Waste Analysis Plan*), and Permit  
7 Attachment G (*Container Management*). Specific facility and process information for the storage  
8 of hazardous and mixed waste at container storage units (CSUs) are provided in Parts 14 (TA-  
9 50), Part 15 (TA-54), and Part 16 (TA-55).

10 The Permittees shall store and otherwise manage containers of hazardous and mixed waste in  
11 accordance with the requirements of 40 CFR § 264.170 Subpart I. The Permittees shall only  
12 store containers at the units specified on the list of Permitted Hazardous Waste Management  
13 Units in **Attachment O**. The Permittees shall not store containers of hazardous or mixed waste in  
14 excess of the maximum capacities for each Permitted CSU identified in **Attachment B (Permit**  
15 **Part A)**.

16 **3.2 CONDITION OF CONTAINERS**

17 The Permittees shall ensure that all containers used to store hazardous and mixed wastes subject  
18 to this Permit are in good condition (e.g., no severe rusting or apparent structural defects) in  
19 accordance with 40 CFR § 264.171. If a container is not in good condition or begins to leak, the  
20 Permittees shall:

- 21 • Transfer the waste from such a container into a container that is in good condition or,  
22 • Manage the waste in some other way that complies with this Permit and the  
23 requirements of 40 CFR § 264.171

24 **3.3 COMPATIBILITY OF WASTE WITH CONTAINERS**

25 The Permittees shall use containers made of, or lined with, materials that will not react with, and  
26 are otherwise compatible with the hazardous and mixed waste to be stored, so that the container  
27 to contain the waste is not impaired (**40 CFR 264.172**).

28 For all containers within a single secondary containment system, the Permittees shall ensure that  
29 all containers are compatible with all hazardous and mixed waste within that containment  
30 system. The Permittees shall ensure compliance with this requirement by conducting pre-  
31 acceptance screening before the hazardous and mixed waste is accepted for storage.

32 **3.4 MANAGEMENT OF CONTAINERS**

33 All containers shall be kept closed during storage, except when waste is added to or removed  
34 from the container or when a container's contents need to be repackaged (**264.173(a)**). Examples  
35 of "closed containers" include, but are not limited to, the following:

- 1       • If the waste is solid: The cover of the container must be in good condition and placed  
2       squarely on the container so there are no apparent cracks or gaps between the lid and  
3       the container, but it need not be secured. For example a lid may have a swinging door  
4       opened by a foot pedal.
- 5       • If the waste is a liquid: All openings of the container must be covered with the cover  
6       securely affixed to the container. As an alternative, a cover must be squarely placed  
7       on a container that is otherwise protected from spilling and other hazards sought to be  
8       prevented by this rule. Containers located in secondary containment and satellite  
9       containers placed or otherwise managed in areas protected from vehicles and material  
10      handling devices, or otherwise managed to prevent tipping or spilling, will be  
11      considered closed when bungs and rings are in place. Such containers may also be  
12      considered closed when equipped with funnels and funnel stem valves or gasketed  
13      funnel lids in good condition. Similarly, containers in secure locations may be  
14      considered closed if merely equipped with weighted and gasketed lids, bung stoppers,  
15      snap ring lids, overlapping covers, or other impermeable devices compatible with the  
16      waste, provided it fits without gaps or holes, minimizes emissions, and protects  
17      wastes from ignition sources.
- 18      • Lids of mixed waste containers must be vented through high efficiency particulate air  
19      (HEPA)-grade filters to pre-clude container pressurization caused by gas generation  
20      and to prevent particulate material from escaping. Containers of mixed wastes with  
21      these filters meet the closed container requirement.

22      The Permittees shall not open, handle or store a container holding hazardous or mixed waste in a  
23      manner that may rupture the container or cause the container to leak (264.173(b)). When waste  
24      containers are opened for waste addition, volume reduction, and/or repackaging, the containers  
25      shall be opened within a work enclosure that provides for confinement of the waste and prevents  
26      the release of waste or waste constituents.

27      The Permittees shall ensure that damaged containers shall be repaired or overpacked or the  
28      contents of the container repackaged in a new container prior to placement in a Permitted  
29      container storage unit.

30      The Permittees shall design, construct, maintain and operate the Permitted container storage units  
31      to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release  
32      of hazardous or mixed wastes or hazardous waste constituents to the air, soil or surface water,  
33      which could threaten human health or the environment.

34      Where necessary, lines of demarcation must clearly identify the type of waste (hazardous, mixed  
35      low level, or mixed TRU) being stored in an area and its state (liquid or non-liquid). The line can  
36      be identified by any means (paint, rope, signs) provided that it doesn't interfere with the safety  
37      procedures of the structure.

### 38      **3.4.1      Acceptable Storage Containers**

39      The Permittees shall only use containers that comply with the requirements of the U.S.  
40      Department of Transportation shipping container regulations (49 C.F.R. § 173 - *Shippers* -

1 *General Requirements for Shipment and Packaging, and 49 C.F.R. § 178 - Specifications for*  
2 *Packaging)* for storage of hazardous, mixed low level, and mixed TRU waste at CSUs.

3 The Permittees shall store hazardous waste in those container types identified in **Attachment A-1,**  
4 **Section 2.1.2** only. These containers include: 0.25, 0.5, 0.75, 1, 2, 4, and 6 Liter containers,  
5 various small 5 to 15 gallon containers; 5-, 14-, 30-, 55-, 83-, 85-, and 110-gallon steel,  
6 polyethylene, or fiber drums; standard and irregularly shaped fiberglass-reinforced plywood  
7 (FRP) boxes; metal overpack boxes, steel standard waste boxes (SWB), steel B25 and B12  
8 boxes, roll-off bins, gas cylinders, and some oversized, custom metal and wooden containers.

### 9 **3.4.2 Waste Container Labeling**

10 The Permittees shall ensure that all containers with hazardous or mixed waste have a “Hazardous  
11 Waste” label that lists the generator name and address, the EPA Identification number, the  
12 accumulation start date, and the applicable EPA hazardous waste number(s). All containers  
13 holding mixed waste shall include a “Radioactive Materials/Radioactive Waste” label.

14 The Permittees shall ensure that all containers not stored on a secondary containment system,  
15 including a secondary containment pallet, are clearly labeled as not containing free liquids.

16 The Permittees shall ensure when waste containers are moved during storage, their waste  
17 package identification numbers (bar codes), origin and destination, and package changes (e.g.,  
18 overpack volume, overpack dimensions) will be documented.

### 19 **3.4.3 Storage Configuration and Minimum Aisle Space**

20 The Permittees are authorized to store containers in rows with a minimum aisle space of 2 feet.  
21 However, the Permittees shall maintain adequate aisle space at all times to allow the  
22 unobstructed movement of personnel, fire protection equipment, spill control equipment, and  
23 decontamination equipment to any area of Facility operation. Additionally, emergency egress  
24 aisles with a minimum aisle space of 2 -feet must be maintained at all personnel doors. At larger  
25 structures or locations, a main aisle down the center is maintained. Containers stored in these  
26 larger structures are typically placed in rows angled from the main aisle (**40 CFR § 264.35**).

27 The Permittees are authorized to stack containers of hazardous and mixed waste to a maximum  
28 of 10-foot high, in accordance with all requirements of the “Performance Oriented Stack Test” at  
29 49 C.F.R. § 178.606(c).

30 The Permittees shall store containers in a manner that allows the containers to be inspected for  
31 leaks, corrosion, deterioration, and for container labels to be read without moving them.

32 Gas cylinders must be stored in cylinder racks, baskets, or on specially constructed pallets that  
33 provide support and restraint.

34 The Permittees shall ensure that containers of mixed wastes not being actively managed and  
35 stored outdoors are precluded from contact with precipitation using weather protective  
36 equipment (e.g., containment shell, secured tarp).

1    **3.5       CONTAINMENT SYSTEMS**

2    **3.5.1      Containers with Free Liquids**

3    The Permittees shall maintain secondary containment systems in all CSUs used to store wastes  
4    which contain free or residual liquids in compliance with 40 CFR § 264.175. The Permittees  
5    shall store containers of hazardous and mixed wastes in a manner that prevents contact with any  
6    liquids that may be present within the secondary containment system.

7    The Permittees shall comply with the secondary containment requirements for hazardous or  
8    mixed wastes that do not contain free liquids with the following listings: F020, F021, F022,  
9    F023, FO26 and F027 (264.175(d)(1)).

10   The Permittees shall remove spilled or leaked waste and accumulated precipitation from any  
11   sumps or other collection areas within 24-hours of detection. The Permittees shall maintain the  
12   base of secondary containment systems to ensure that they are impervious to contain leaks, spills,  
13   and/or accumulated precipitation until the collected liquids are detected and removed. The  
14   Permittees shall also ensure that the containment system have adequate structural strength to  
15   withstand the stresses of daily operations.

16   The Permittees shall seal or coat secondary containment structures with a material that is  
17   compatible with and impervious to the wastes stored in the container storage area. If a coating or  
18   sealant is used the Permittees shall maintain documentation in the Facility Operating Record that  
19   includes, but is not limited to, the manufacturer's specifications, that the coating or sealant was  
20   applied in accordance with the manufacturer's specifications, and that the coating or sealant is  
21   re-applied in accordance with the manufacturer's specifications. If the base of the containment  
22   unit has expansion or construction joints, the Permittees shall install and maintain chemically  
23   resistant water stops, which are embedded in the concrete, or equivalent external systems (e.g.  
24   sealant systems).

25   If a flexible liner is used, the Permittees shall maintain documentation in the Facility operating  
26   record that includes, but is not limited to, the manufacturer's specifications, that the flexible liner  
27   was applied in accordance with the manufacturer's specifications, and that the flexible liner is  
28   maintained in accordance with the manufacturer's specifications.

29   The Permittees shall inspect the Permitted container storage units at least weekly for evidence of  
30   leaks or deterioration of the containment system by corrosion, cracking, differential settlement or  
31   other factors. If the base, liner or coating is cracked or otherwise damaged, the Permittees shall  
32   repair the damage promptly and properly, within 15 calendar days of detecting the problem. The  
33   Permittees shall perform any concrete or asphalt repair using an appropriate repair method (e.g.  
34   ACI standards or manufacturer's recommendations), which will prevent future damage at the  
35   same location. The Permittees shall apply coatings or sealants, if applicable, to the repaired area  
36   before waste storage activities resume. The Permittees must record any damage or repair to  
37   containment systems in the inspection logs required by General Permit Part 2, Section 2.6.3  
38   (*Inspection Logs and Records*).

1    **3.5.2     Container Storage Areas that Store Containers without Free Liquids**

2    For container storage areas that will only store wastes without free liquids, the Permittees shall  
3    ensure that the storage areas are sloped or otherwise designed and operated to drain and remove  
4    liquid resulting from precipitation or other liquids. The Permittees shall ensure that all containers  
5    are elevated or otherwise protected from contact with any accumulated liquid. The Permittees  
6    shall ensure that any containers that are not self-elevated by design are elevated (e.g., on pallets),  
7    not placed directly on the storage area surface, to prevent any contact with accumulated  
8    precipitation or other liquids.

9    The Permittees shall ensure that the permitted units identified in *Hazardous Waste Management*  
10   *Units* (Attachment O), Table O-1, as managing “non-liquid wastes only” only manage non-liquid  
11    wastes.

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