



Department of Energy
Albuquerque Operations
Los Alamos Area Office
Los Alamos, New Mexico 87544

Rec'd
7/12/90

RETURN RECEIPT REQUESTED

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Coby Muckelroy
Health and Environment Department
Environmental Improvement Division
Hazardous Waste Bureau
1190 St. Francis Drive
Santa Fe, NM 87503

Dear Mr. Muckelroy:

This letter constitutes the response of the Department of Energy (DOE) and the University of California (the University) to the Notice of Violation (NOV) dated June 18, 1990, (NM0890010515), received for the Los Alamos National Laboratory (LANL). In accordance with Section 74-4-10(A) (NMSA-1978), all alleged violations have been corrected within the 30 days allowed by statute. The violations, responses, and actions taken are set forth below.

Violation #1: "At numerous satellite accumulation points, drums had unsealed lids just laying on the tops. This is a violation of HWMR-5, Part III, 40 CFR section 262.34(c) (1) (i). To be considered properly closed, containers must not have loosely fitting tops."

Response: Personnel responsible for the management of satellite accumulation areas have been advised that containers must be kept closed (and sealed) at all times except when hazardous wastes are being placed in them (see enclosures A, B, and C). On July 5, 1990, University personnel visited all accumulation areas which were found inadequate by the Environmental Improvement Division (EID) and the U. S. Environmental Protection Agency (EPA) during the inspection. They assured that all satellite and less-than-90-day accumulation areas were being adequately maintained.

Violation #2: "At the TA 3-1486 pesticide shed, which is a satellite accumulation point, a container of a diazinon liquid labelled hazardous waste was not closed. This is also a violation of HWMR-5, Pt. III, sec. 262.34(c) (1) (i)."

Response: The Diazinon liquid mixture was deemed to be non hazardous by virtue of a Material Safety Data Sheet which indicated no hazardous constituents or characteristics. The hazardous waste label on the container was mistakenly attached. The operator of the pesticide shed has



been advised to remove the hazardous waste label and manage the container as a solid, not hazardous waste. However, the container has been properly closed and personnel have been instructed to keep this and all other containers closed when not in use.

Violation #3: "At the TA 16-460 satellite accumulation point, a drum of HE-contaminated solvent had a badly rusted top. This is a violation of HWMR-5, Pt. III, sec. 262.34 (c) (1) (i). This drum should be replaced by a container in good condition."

Response: The rusted lid on the container was replaced with a non-rusted lid, the container was removed from service, and sent to the permitted storage area (TA 54, Area G). A new polyethylene-lined container is now used at the TA 16-460 satellite accumulation area.

Violation #4: "At TA 46-24 and 154, and TA 53-17, containers at satellite accumulation points had no proper markings to indicate their contents. This is a violation of HWMR-5, Pt. III, sec. 262-34(c) (1) (ii)."

Response: Hazardous waste labels have been placed on containers at TA 46-24 and 154, and TA 53-17. Personnel at these sites have been advised to label all containers which contain hazardous waste (see enclosure A).

Violation #5: "At the TA 35-125, TA 39-2, and TA 46-164 satellite accumulation points, hazardous waste in excess of fifty-five gallons had accumulated at the sites without compliance with applicable requirements. This is a violation of HWMR-5, Pt. III, sec. 262.34 (c) (2)."

Response: Excess containers were removed by the Waste Management Group (HSE-7) within 3 days of the March inspection. Personnel at these sites have been advised to request removal of containers from satellite accumulation areas to the permitted storage area (TA 54, Area L) when containers have reached eighty percent of capacity, or 44 gallons.

Violation #6: "At TA 53-111A, at least one of the personnel at the satellite accumulation point apparently disposes of acetone contaminated rags in the regular trash bin, even though there is a can labelled for contaminated rags in the shop. Disposal of hazardous waste by a generator at other than a hazardous waste management facility is a violation of HWMR-5, Pt. III, sec. 262.12(c)."

Response: All solvent-contaminated rags in the vicinity of this building are now managed as hazardous waste pursuant to the development of a policy on classification and management of solvent contaminated waste rags. This policy will take the conservative approach of deeming all solvent contaminated waste rags as hazardous waste when discarded, regardless of whether the discarded rags are soaked, moist, or dry (see enclosure C).

Violation #7: "At TA 53-1, a tank in the basement receives contaminated effluent from the building labs. An adequate hazardous waste determination has not been performed on this waste stream. This is a violation of HWMR-5, Pt. III, sec. 262.11. Very little testing of this waste stream is done, and since it varies in nature, a more thorough testing program needs to be implemented to ensure that it is never hazardous. At the time of the inspection, personnel did not have adequate data to prove that it is not a hazardous waste tank."

Response: On July 12, 1990, LANL personnel inspected the tank in question and found the waste to exhibit a pH of less than 2.0. The tank was placarded as a hazardous waste tank on July 13, 1990, and is now managed as a less-than-90-day accumulation unit. New procedures will be implemented at TA 53-1 to prohibit disposal of strong acids and bases. The waste currently in the unit will be removed within 60 days and the tank will no longer be managed as a hazardous waste management unit.

Violation #8: "The transporter's identification number on a manifest accompanying an off site shipment of hazardous waste was incorrect in that it was missing a digit. This is a violation of HWMR-5, Pt. III, sec. 262.20(a)."

Response: The Waste Management staff have been made aware of this discrepancy and advised to provide better quality control on all hazardous waste management documentation, including hazardous waste manifests.

Violation #9: "Two drums of lead solid hazardous waste were being stored in TA 54-70, which is an area that is not designated for such storage in the permit. This is a violation of Permit Module III.A.1."

Response: The containers in question have been removed from TA 54-70 and placed in a cleared area within TA 54, Area L in compliance with Permit Module III.A.1.c.

The IT Corporation has been tasked by LANL to provide generator training on proper waste characterization and container management at points of generation. This training began on May 7, 1990, and will continue through September, 1990. An estimated 3,000-4,000 Los Alamos National Laboratory and World Services personnel will attend this training which will improve compliance at satellite and less-than-90-day accumulation areas. The areas of concern addressed in this NOV, and many others, are covered in the generator training course, which should serve to control future problems of this type throughout this facility.

The NOV makes reference to Permit No. NM0890010515, and provides that one purpose of the NOV is to require compliance with the Permit and that the Permit may be terminated if the violations are not corrected within thirty days of receipt of the NOV.

C. Muckelroy

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As stated in a letter sent to Mr. Richard Mitzelfelt, Director of EID, dated March 9, 1990, it remains unclear whether the Permit is in effect or whether the Los Alamos National Laboratory remains in interim status. This is because, to our knowledge, the Director of EID (the Director) has not entered his decision adopting the decision of the Environmental Improvement Board of February 19, 1990, as required by Section 902.F. of the Hazardous Waste Management Regulations. Although Mr. Mitzelfelt was urged to enter his decision in accordance with Section 902.F., we have received no response to the letter. Therefore, we remain uncertain as to the status of Permit No. NM890010515.

Based on this submittal, the DOE and the University, believe that all the issues referenced in your NOV have been addressed. If you have any questions regarding this response, contact Dr. Paul Schumann of my staff at 667-5288 (FTS/843-5288) to arrange a meeting between DOE, the University, and State personnel.

Sincerely,



Harry T. Season, Jr.
Acting Area Manager

LESH:2PS-406-7

Enclosures

cc:

Lynn Prince, US EPA Region 6 (6H-HS)
J. Schumann, EH-232, HQ
J. Themelis, EHD, AL
J. Puckett, HSE-DO, LANL, MS-K491

Enclosure A

RESULTS FROM RCRA INSPECTION

(Notice to LANL generators of apparent
deficiencies/violations cited by EPA/EID during the March
1990 RCRA CEI)

March 21, 1990

Copy to M-Division Group Leaders / Safety Committee members, please. For action
17 *Info*

Los Alamos

Los Alamos National Laboratory
 Los Alamos, New Mexico 87545

memorandum

	LAG	
✓	ONE	
✓	TRAF	
	JRT	
	LWH	
	FAD	
✓	FAJ	3/23
	EBS	
	ALD	
	BFB	3/6
	FDe	
	FK	
	Desi	

TO Distribution
 FROM Tony Grieggs, HSE-8 *AG*
 SYMBOL HSE-8:90-232
 SUBJECT RESULTS FROM RCRA INSPECTION

DATE March 21, 1990

MAIL STOP/TELEPHONE: K409/5-0451

During the period March 5-9, the New Mexico Environmental Improvement Division (EID) and the Environmental Protection Agency (EPA) conducted a joint inspection of LANL facilities. The purpose of the inspection was to assess compliance with the Resource Conservation and Recovery Act (RCRA) which addresses treatment, storage, and disposal of hazardous and mixed wastes. Technical Areas visited during the inspection include: 3, 14, 15, 16, 21, 22, 35, 36, 39, 43, 46, 50, 53, 54, 59, and 61. Although the formal Notice of Violation (NOV) is not expected for several months, we need to take corrective action immediately. Some of the items we can expect to see listed include inadequate training, improper storage of hazardous waste, improper disposal of hazardous waste, lack of established procedures for handling hazardous waste. Specific areas and concerns were identified at the close-out and should be addressed immediately, they are listed below.

TA-3-38

(Improper storage) Open drums containing rags contaminated with hazardous waste were observed at several satellite accumulation points. The lid retaining rings were not in place.

All containers holding hazardous waste must be closed.

TA-3-39

(Improper storage) This <90 day storage area held an undated drum containing hazardous waste.

All containers holding hazardous waste in a <90 day storage area must be dated at the time they first receive waste.

March 21, 1990

TA-15-20 Shop 27

(Inadequate training) Hazardous waste handling procedures were not established. Employees could not locate satellite storage area.

Establish a hazardous waste storage area if necessary and immediately train personnel

TA-16-340

(Improper storage) At the time of the inspection, it was unclear whether several 80 gallon drums containing mixtures of water and solvents, and contaminated with HE were hazardous waste or process material. Employees were unable to satisfactorily explain their procedures. The employee stated that he was saving the material for possible further processing but that it was in its final form prior to being sent to the TA-16 burning ground. This would constitute illegal storage of hazardous waste if it is determined that the material is no longer needed.

If this practice continues, a <90 day storage area needs to be established. Contact HSE-8 for further guidance.

TA-16-460

(Improper storage) A drum containing flammable waste solvents (acetone) was heavily rusted and the bung was not in place.

All containers holding hazardous waste must be closed. Containers must be sound.

TA-22-91 (south side)

Satellite accumulation point exceeded capacity (55 gal). All containers were properly labeled and dated. Pickup was within the three day limit therefore no violation was cited.

TA-35-85 (east end)

(Improper storage) Inspectors were unable to determine the total volume of hazardous waste stored at this site. One drum labeled as hazardous waste may actually contain oil without any hazardous constituents.

Proper labeling and good housekeeping will eliminate any questions about the total volume of hazardous waste in storage. Oils are not a hazardous waste unless they contain a listed hazardous constituent or exhibit one or more of the hazardous characteristics (see attachments).

TA-35-125 (south side)

(Improper storage) Satellite storage area exceeded capacity (55 gal). One of the three drums present was not dated properly nor was it closed. The two drums that were dated had exceeded the three day holding period. Spillage from transfer operations had not been cleaned up.

When capacity (55 gal. of hazardous waste or 1 qt. acutely hazardous waste) has been exceeded, the generator must immediately date the containers. He then has 3 calendar days to dispose of all hazardous waste in storage. All spills must be cleaned up immediately.

TA-39-2-8

(Improper storage) Satellite storage area exceeded capacity. Containers holding rags contaminated with hazardous waste were open (retaining rings were not in place) and undated. Containers holding free liquids were undated. Disposal paperwork had not been submitted.

Disposal should be arranged before capacity is reached. If the capacity is exceeded, all containers must be immediately dated. The generator then has 3 calendar days to arrange disposal of all hazardous waste in storage. All containers must be kept closed.

TA-39-2 (outside)

(Improper storage) Containers holding rags contaminated with hazardous constituents were open (retaining rings were not in place).

All containers holding hazardous waste must be closed.

TA-39-6

(Improper storage) Containers holding hazardous waste were open.

All containers holding hazardous waste must be closed.

March 21, 1990

TA-46-76

(Improper storage) Unlabeled containers were observed at this satellite storage area. It was unclear whether they contained hazardous waste.

All containers holding hazardous waste must be labeled. Proper labeling of all containers, regardless of their contents, will prevent future confusion.

TA-46-154

(Improper storage) This satellite storage area held open, unlabeled containers of hazardous waste (solids and liquids). Legal capacity was exceeded and none of the containers was dated.

Refer to the attachment titled "Summary of requirements for Satellite storage."

TA-53-15, 16, 30

(Improper storage) Containers holding rags contaminated with hazardous waste were not closed (the retaining rings were not in place).

All containers holding hazardous waste must be closed.

TA-53-17-Shop 44

(Improper storage) Container holding hazardous waste was not labeled.

All containers holding hazardous waste must be labeled.

TA-53-17-111A

(Improper storage, improper disposal) During questioning by an inspector, an employee stated that he disposed of rags contaminated with acetone and ethanol in the building trash. He further stated that if those same rags were radioactively contaminated he would dispose of them in the yellow "RAD" can. This same room had an established satellite storage area with an open container of hazardous waste. Other employees in the area stated that all hazardous and mixed waste was properly stored in the satellite storage area.

Distribution
HSE-8:90-232

-5-

March 21, 1990

Do not dispose of any hazardous or mixed waste in the building trash. Segregate hazardous, mixed, and radioactive waste and place them in clearly labeled containers. Contact HSE-8 for further guidance.

TG:bjh

Distribution:

- C. Blackwell, CLS-DO, MS J563
- F. Jackson, M-DO, MS P915
- S. Helmick, INC-DO, MS J515
- M. Hollen, MP-DO, MS H832
- J. Graham, AT-DO, MS
- K. Joy, SST-DO, MS D446
- A. Valentine, J-DO, MS F670
- E. Hadden, P-DO, MS D408
- J. Clements, MST-6, G770
- G. Allen, CLS-7, MS E525
- L. Wampler, MEC-5, MS D475
- M. Barr, WX-3, MS C934
- J. Larkin, HSE-11, MS

Summary of requirements for <90 day storage sites.

- 1) Condition of loading/unloading areas. Area must be free of obstacles or deterioration that could cause a spill or accident.
- 2) Condition of storage area. Storage area should be kept free of obstacles that could prevent free access by emergency personnel. Containers must be spaced a minimum of two (2) feet apart to allow for visual inspection and entry by emergency personnel with equipment. Area should be free of possible ignition sources. Secondary containment structures must be inspected for damage.
- 3) Containers must be segregated according to the compatibility of the wastes that they hold. A storage container holding a hazardous waste that is incompatible with any waste or other material stored nearby must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device. Sound laboratory practices must be followed when storing hazardous waste. (See attached compatibility chart or contact HSE-8 or HSE-7 for guidance)
- 4) Container material must be compatible with the waste. Do not store a waste that is corrosive to, or otherwise will, cause deterioration of the container. HSE-7 can assist you with choosing the proper container.
- 5) Container must be in good condition. Containers should be stored in a dry, preferably sheltered location. Deteriorated or damaged containers must be replaced immediately. Drums for liquid wastes should have a "bung" top. Do not package solids and liquids together.
- 6) All containers must be closed. When collecting rags in an open head drum, the drum is not considered to be closed unless the retaining ring is in place.
- 7) All containers must be properly labeled "HAZARDOUS WASTE" and the major hazardous constituents listed. If more than one type of hazardous waste is stored in different containers, then each container should also be labeled by content (e.g., solvents, acids, caustics, etc.).
- 3) An accumulation start date must be properly marked on all containers, at the time the container first receives waste.
- 9) No containers may exceed 90 days from date accumulation begins until they are delivered to TA-54 or TA-50. The 90 day period includes transport time by HSE-7. For disposal, submit a Chemical Waste Disposal Request (CWDR) form to HSE-7 at MS J593. Allow for a minimum of two weeks notice.

- 10) Warning signs with the legend "DANGER-UNAUTHORIZED PERSONNEL KEEP OUT" must be readable and prominently posted. The storage area should be identified by a sign that reads "HAZARDOUS WASTE LESS THAN 90 DAYS STORAGE AREA." (Available from HSE-8)
- 11) <90 day storage areas must be inspected daily, and a copy of the inspection record form must be submitted weekly to HSE-8. All records must be maintained for a minimum of three years by the generator. Inspection forms should be sent to Tony Grieggs, HSE-8, MS K490, ph. 665-0451.
- 12) Hazardous waste leaks or spills must be cleaned up immediately and the resulting material handled as hazardous waste also.

Summary of requirements for satellite storage sites.
(Submittal of weekly forms is not required)

- 1) Waste must be accumulated in containers at or near the point of generation. Area must be free of obstacles or deterioration that could cause a spill, an accident, or prevent access by emergency personnel and equipment. Area should be free of possible ignition sources.
- 2) Waste must be under the control of the generator.
- 3) Containers must be in good condition. Containers should be stored in a dry, preferably sheltered location. Deteriorated or damaged containers must be replaced immediately. Drums for liquid wastes should have a "bung" top. Do not package liquid and solid wastes together. Containers should be far enough apart to allow for visual inspection and access by emergency personnel with equipment.
- 4) Container material must be compatible with the waste. Do not store a waste that is corrosive to or otherwise will cause deterioration of the container. HSE-7 can assist you with choosing the appropriate container.
- 5) Containers must be segregated according to the compatibility of the wastes that they hold. A storage container holding a hazardous waste that is incompatible with any waste or other material stored nearby must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device. Sound laboratory practices must be followed when storing hazardous waste. (See attached compatibility chart or contact HSE-8 or HSE-7 for guidance)
- 6) All containers must be kept closed. When collecting rags in an open head drum, the drum is not considered to be closed unless the retaining ring is in place.
- 7) Containers must be labeled with the words "HAZARDOUS WASTE" and the major hazardous constituents should be listed.
- 8) Generators may accumulate a total of 55 gals of hazardous waste or 1 qt of acutely hazardous waste. This is the maximum allowable volume for a satellite storage area. If in doubt, contact the Solid Waste Section of HSE-8.
- 9) Wastes in excess of the above stated amounts may not be held more than 3 calendar days from the time the amount is exceeded. Dispose of all waste prior to this time. For disposal, submit a Chemical Waste Disposal Request (CWDR) form to HSE-7 at MS J593.
- 10) Containers holding the excess accumulation must be labeled as in (7) and marked with the date the excess amount began accumulating.

- 11) Signs must be readable and prominently posted. Signs should read "SATELLITE HAZARDOUS WASTE STORAGE AREA." (HSE-8 will provide these)
- 12) Hazardous waste leaks or spills must be cleaned up immediately and the resulting material handled as hazardous waste also.

DETERMINING IF YOU HAVE A HAZARDOUS WASTE

- A. Characteristic Wastes: A material is a hazardous waste if it exhibits any of the following characteristics:
- 1) Ignitability
 - a) Flash point less than 60°C (140°F).
 - b) Is an ignitable compressed gas.
 - c) It is an oxidizer
 - d) Is not a liquid and is capable, under standard temp. and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes.
 - 2) Corrosivity - Aqueous with a pH ≤ 2 or ≥ 12.5 , OR it is a liquid and corrodes steel at a rate greater than .25"/year.
 - 3) Reactivity
 - a) Normally unstable and readily undergoes violent change without detonating.
 - b) Reacts violently with water.
 - c) Forms potentially explosive mixtures with water.
 - d) Generates toxic gases, vapors, or fumes when mixed with water.
 - e) Is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes.
 - f) Capable of detonation or explosive reaction if subjected to a strong initiating source or if heated under confinement.
 - g) Capable of detonation or explosive decomposition at standard temperature and pressure.
 - h) Forbidden, Class A or Class B explosive.
 - 4) EP-Toxicity - The occurrence of the following metals in the stated concentrations as determined by EP-TOXIC procedures. Extraction Procedure (EP) is a specific analytical procedure required by the Environmental Protection Agency.

<u>Contaminant</u>	<u>Concentration</u>	<u>Units</u>
Arsenic	5.0	mg/l
Barium	100.0	mg/l
Cadmium	1.0	mg/l
Chromium	5.0	mg/l
Lead	5.0	mg/l
Mercury	0.2	mg/l
Selenium	1.0	mg/l
Silver	5.0	mg/l

B. **Listed Wastes:** A material may be a hazardous waste if it is contaminated with a "listed" hazardous constituent.

The entire list of hazardous constituents is too extensive to include in this document. Some of the more common hazardous constituents that may be encountered at the laboratory are listed below. (The list will be attached to the revised AR 10-3)

Halogenated solvents

Tetrachloroethylene
Trichloroethylene
Methylene chloride
1,1,1-trichloroethane
Carbon tetrachloride
Chlorobenzene
Ortho-dichlorobenzene
Trichlorofluoromethane
1,1,2-trichloro-1,2,2-trifluoroethane

Non-halogenated solvents

Xylene
Acetone
Ethyl acetate
Ethyl ether
Toluene
Methyl ethyl ketone (MEK)
Methyl isobutyl ketone (MIK)
n-butyl alcohol
Cyclohexanone
2-nitropropane

Methanol
Cresols
Cresylic acid
Nitrobenzene
Carbon disulfide
Isobutanol
Pyridine
Benzene
2-ethoxyethanol

Enclosure B

ALL SATELLITE HAZARDOUS WASTE ACCUMULATION SITE OPERATORS

(Notice for World Services management to all generators of
hazardous waste at World Services on drum closure at
satellite accumulation areas)

March 6, 1990

MEMORANDUM

TO: ALL SATELLITE HAZARDOUS WASTE ACCUMULATION SITE
OPERATORS

FROM: Supervisor, PENV

=====

DATE: March 06, 1990

MEMO No. PENV 90-155

SUBJECT: DRUM CLOSURE REQUIREMENTS AT SATELLITE HAZARDOUS
WASTE ACCUMULATION SITES

A recent inspection by the NM Environmental Improvement Division and the US Environmental Protection Agency indicated that our current method of closure on drums containing hazardous waste, primarily solvent soaked rags, is inadequate. For closure to be effective a drum must be sealed as otherwise solvent vapors escape. Since this is a compliance item the following steps must be taken immediately:

i) All drums that are used for the containment of solvent soaked rags must be sealed between use. In the case of drums with a metal lid-clamp, the clamp must be in place and holding the lid down, although not necessarily completely tightened down until the end of the work period.

ii) All drums containing liquid hazardous waste must be sealed with a threaded bung when not in use. It is not acceptable to leave funnels in drums unless the funnel seals against the drum opening and is itself fitted with a sealing cover.

iii) Any drum that cannot be sealed in the above manner must be replaced with one that can be sealed as described above.

PENV understands that these requirements are cumbersome, and we are working on some ideas to simplify the approach. As soon as approval is obtained for an alternative method you will be notified. Meanwhile these new requirements are necessary for the company to remain in compliance with the Resource, Conservation and Recovery Act. Your cooperation with this requirement is appreciated. Please call PENV at 7-0104 if you have any questions.



Michael Brown

cy: S.J. Calanni, VP/General Manager, PMGR
A. L. Da Silva, Manager, Operations, OMDO

J. J. Lopez, Manager, PHSE
T. Carter, Manager, MDDO
D. Castaneda, Manager, CDDO
D. Lyerly, Manager, SSDO
S. Nalley, Manager, UMDO
G. Vavra, Manager, NMDO
Jim White, HSE-8, K490
Charlie Barnett, PENV
reading file
file

List of individuals who received this memo:

Victor Romero, MDPE,
Manny L'Esperance, MDSG,
Benito Martinez, MDSR,
Tony Gutierrez, MDSS,
George Lujan, CALD,
Dave Maestas, EMTD
Reuben Salazar, UWGW
Fred Thronas, NMDO
Paul Sparks, NMDO
Joe Ortiz, UESD
Teri Monaghan, PENV

Enclosure C

**ES&H POLICY/GUIDANCE: DISPOSAL OF SOLVENT-CONTAMINATED RAGS
(AND KIMWIPES)**

(Memorandum from HSE-8 to HSE-7 on establishing a uniform
policy for management and disposal of solvent-contaminated
waste rags)

DRAFT

Pat Josey, HSE-7

Ken Hargis, HSE-8

ES&H Policy/Guidance: Disposal of Solvent-Contaminated Rags
(and Kimwipes)

In an effort to eliminate the confusion over the management of solvent-contaminated rags (and Kimwipes), HSE and Pan Am World Services (PENV) have developed a disposal policy applicable to all laboratory personnel, including contractors. Solvent-contaminated rags are disposed material used to wipe off surfaces which have been exposed to organic solvents or degreasers. According to the Environmental Protection Agency (EPA) and the New Mexico Environmental Improvement Division (EID), these rags, whether soaked, moist, or bone dry, are considered contaminated and must be disposed of as hazardous waste. While the hazardous waste regulations allow for different methods of disposal or treatment depending on the type of organic compound used for solvent or degreasing properties, the laboratory and PENV are establishing a uniform management and disposal policy.

I. Management of Rags at Individual Workstations

The current hazardous waste regulations are meant to address all generators of hazardous wastes in the U.S. Thus, they often appear vague and counterproductive. However, the regulations also allow room for constructive interpretation in order to enhance sound management of hazardous wastes.

To ease the burden of managing solvent-contaminated rags at workstations far removed from satellite accumulation areas, the generator will be allowed to place discarded rags in temporary sealable containers, such as Zip-Lock baggies. These containers should have the following statement, "Solvent-Contaminated Rags", written on the side with an indelible marker. They should always be sealed after placing a waste rag and only one should be used for organic solvents at each workstation. At the end of the day, workshift, or the operation (whichever comes first) generating the waste rags, the generator must discard the container in the nearest satellite accumulation container used for storage of solvent-contaminated waste rags.

II. Management of Solvent-Contaminated Rag or Kimwipe Containers

In observance of the regulation affecting the management of hazardous wastes at satellite accumulation areas [Title 40, Part 262.34(c)(1)], each container accumulating hazardous wastes must be closed at all times except during the moment of placing the wastes. The generator must assure that the container where his solvent-contaminated rags were placed is properly closed by observing the intent of the closing mechanism of the container (i.e. bung cover, container cover, ring seal).

III. Intermingling of Rags Contaminated with Different Solvents

Literally hundreds of organic compounds may be used for their solvent properties. Many of these solvents are hazardous while others are not. The EPA has determined that certain solvents become hazardous wastes when discarded either because they are toxic, flammable, or may damage the ozone layer in the atmosphere.

Rags contaminated with any of the following chemicals listed below may be discarded in the same container:

1. Acetone
2. Benzene
3. N-butyl alcohol
4. Carbon disulfide
5. Carbon tetrachloride
6. Chlorinated fluorocarbons (freons)
7. Chlorobenzene
8. Cresols
9. Cresylic acid
10. Cyclohexanone
11. 2-Ethoxyethanol
12. Ethyl acetate
13. Ethyl benzene
14. Ethyl ether
15. Isobutanol
16. Methanol
17. Methylene chloride
18. Methyl ethyl ketone
19. Methyl isobutyl ketone
20. Nitrobenzene
21. 2-Nitropropane
22. Ortho-dichlorobenzene

23. Pyridine
24. Tetrachloroethylene
25. 1,1,1-Trichloroethane
26. 1,1,2-Trichloroethane
27. 1,1,2-Trichloro-1,2,2-trifluoroethane
28. Trichloroethylene
29. Trichlorofluoromethane
30. Toluene
31. Xylene

Rags which contain ignitable (flash point less than 140° F.) organic solvents and are not listed above should be placed in a separate satellite accumulation container. Do not mix solvent-contaminated rags with other substances or radioactive components. Solvent-contaminated rags which are contaminated with radioactive components should be managed the same way as non-radioactive solvent-contaminated rags. However, a separate container must be used to store solvent-contaminated, radioactive rags. The attached decision flowchart will assist you in determining the proper method of disposal for contaminated rags.

The preceding policy addresses only solvent-contaminated rags. The policy is not applicable to liquid organic solvents. Contact the HSE-7 Waste Management Group (5-4000) for assistance in storing discarded liquid solvents.

JC:MB:

Attachment

Cy: T. Gunderson, HSE-DO
J. Jackson, HSE-DO
T. Drypolcher, HSE-7
M. Brown, PENV

