

P.A.
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Los Alamos

NATIONAL LABORATORY

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Date: December 16, 1994

Symbol: GL:10525-9403/03026

Susan McMichael, Esq.
Assistant General Counsel
Office of the General Counsel
New Mexico Environment Department
P.O. Box 26110
Santa Fe, NM 87502

SUBJECT: COMPLIANCE ORDER 94-09

Dear Ms. McMichael:

At our meeting on December 6, 1994, in connection with the above referenced Compliance Order, we indicated that we would be furnishing you within 10 working days of the meeting, copies of documents supportive of our position on various Findings/Conclusions alleged in this Order. Please find enclosed 12 such documents that respond to Findings/Conclusions as follows:

1. Item 1 responds to F-12, C-68, O-3.
2. Item 2 responds to F-14, C-70, O-3 - *multiple etc*
3. Item 3 responds to F-15, C-71, O-3
4. Item 4 responds to F-21, 23, 24, C-78, 80, 81, O-5,7,8
5. Item 5 responds to F-22, C-79, O-6
6. Item 6 responds to F-26, C-82, O-9
7. Item 7 responds to F-29, C-84, O-10
8. Item 8 responds to F-32, C-87, O-13
9. Item 9 responds to F-39, C-88, O-14
10. Item 10 responds to F-40, C-88, O-14
11. Item 11 responds to F-44, C-90, O-16
12. Item 12 responds to F-55, C-101, O-27



16634

Susan McMichael, Esq.
December 16, 1994
Page 2

We trust that you will find these documents responsive to your requests. We are including as an enclosure a list of action items that we understand NMED agreed to address based on the discussions at our meeting.

We appreciate your cooperation with regard to this matter.

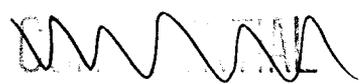
Sincerely,



Joseph B. Rochelle, LC/GL
Staff Attorney

Enc.:a/s

Cy: Lisa Cummings, Esq., w/enc., NMED
Jon Mack, P24 w/o enc., MS A316
Alan McMillan, ESH-DO, w/o enc., MS K491
Alice Barr, ESH-19, w/o enc., MS K498
Tony Grieggs, w/o enc., MS K498
CIC-10, MS A150
LC/GL Records
File (2)



ACTION ITEMS FOR NMED

The items numbered below describe the status of each matter addressed in the Compliance Order that require further action on the part of NMED. For brevity's sake, the following abbreviations are used:

Finding = F
Conclusion = C
Ordered Action = O
Proposed Penalty = P

When no Ordered Action is stated, or no Penalty proposed, then no "O" or "P" will appear next to that item. At the meeting we did not attempt to address reduction in penalty amount, and so this summary will not address responses to penalty calculations.

1. F-20, C-77, O-5, P (at TA-41 -1 less than 90 day storage area, no decontamination equipment was reasonably available): At the meeting we noted that there were no free liquids stored here. ACTION ITEM: NMED agreed to check its files and redetermine whether or not a violation occurred.
2. F-34, C-88, O-14, P (TA 3-40, waste not within control of generator at satellite accumulation area): We denied this item in our Answer and gave our rationale at the meeting. ACTION ITEM: NMED agreed to discuss internally and get back to us on this one.
3. F-35, C-88, O-14, P (TA 3-40-W112, waste not within control of generator at satellite accumulation area): We denied this item in our Answer. The State indicated that it would reconsider; each of the labs is on the same corridor. ACTION ITEM: NMED to reconsider and get back to DOE/LANL.
4. F-37, C-88, O-14 P (TA 11-24, waste not within control of generator at satellite accumulation area): We denied this item in our Answer. We described the administrative and physical controls in place for this area; NMED agreed to reconsider. ACTION ITEM: NMED to reconsider and get back to us on its position.
5. F-54, C-100, O-26 (TA 16 flash pad unit, use of processes not specified in LANL's Part A): ACTION ITEM: NMED will check this item out; the allegation may be inaccurate.
6. F-55, C-101, O-27 (TA 14 burn cage not identified in Part A of LANL permit application): ACTION ITEM: NMED will check typo in part A; LANL will correct Part A in next permit mod.

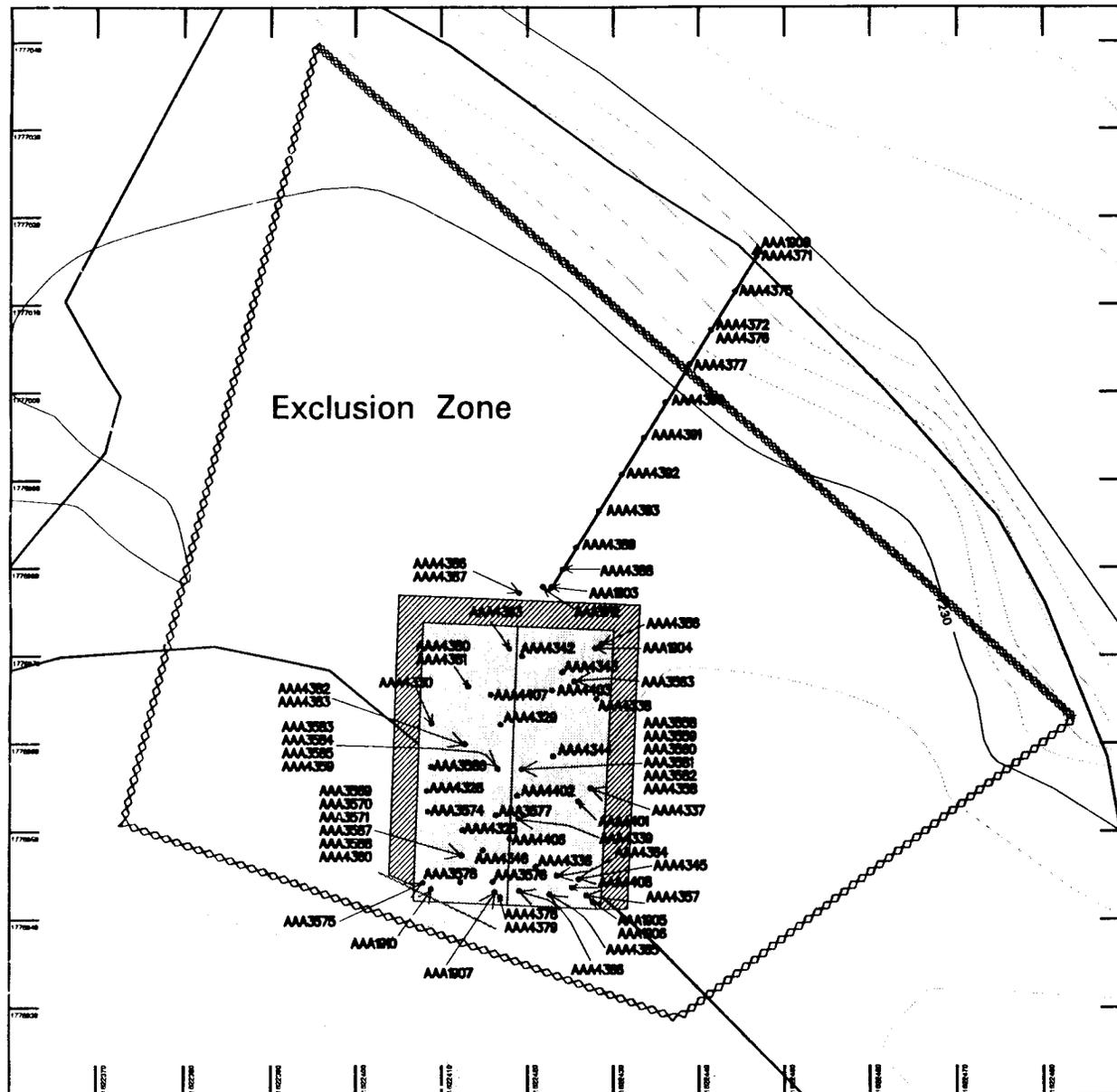
Items Requested by NMED in Response to C094-09
12/16/94

1. sample locations map - Catholic Church waste
2. explanation why TA-50 sludge is not listed waste
3. waste characterization data for TA-50-114
4. TA-21-427 <90 day storage area location map showing distance to decontamination and emergency equipment
5. documentation verifying no active waste management while grounding wire disconnected
6. Site-Specific Emergency Response Plan - TA-21-427
7. documentation verifying container at TA-9-21-135 contained work in progress not waste
8. documentation verifying volume of waste stored at TA-35-85-106B was <55 gallons
9. documentation verifying satellite accumulation area was within generator control at TA-35-85-106B
10. TA-35-125-F108 satellite accumulation area location map showing physical setting of laboratory
11. waste characterization data for TA-9-21-AE191
12. documentation verifying NMED will change Part A TA-14 burn cage error

ORIGINAL

ITEM 1.

7/1/01



- LEGEND**
- Contours, 10 ft
 - Contours, 2 ft
 - 100# Gas Main
 - Road, Paved
 - Septic Tank #6
 - Trench Around Septic Tank
 - Sample Sites
 - Pipe Outfall

University of California
 Los Alamos National Laboratory
 Earth and Environmental Sciences
FIMAD
 Map Coordinates in New Mexico State Plane Feet
 Grid interval, in feet: 10
 Feet per inch on map = 20
 Produced by: Doug Walther
 G102206

Septic Tank #6 and Sample Points



ITEM 2.

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What study from SM-66

LANL MEMORANDUM ON TA-50 SLUDGE

I. INTRODUCTION

In Compliance Order 94-09, Finding No. 14 alleges that Los Alamos National Laboratory (LANL) had not performed an adequate waste determination as to the metal content of wastewater treatment sludge generated at the main TA-50 wastewater treatment facility. The narrative explanation for the penalty calculations of the New Mexico Environment Department (NMED) for this Finding further states that an adequate determination for heavy metals had not been performed and that a TCLP test for metals should have been performed at least initially and perhaps periodically. At a negotiation meeting on Tuesday, December 6, 1994, LANL representatives provided NMED representatives with a two page memorandum that demonstrated that LANL had met TCLP requirements with respect to the sludge. At the meeting LANL was asked to address the issue of why the electroplating wastewater sludge listing should not apply to the TA-50 sludge. While addressing this issue is not required by nor discussed in Compliance Order 94-09, LANL offers this memorandum in order to respond to the request made at the December 6, 1994 meeting.

II. BACKGROUND

The TA-50 wastewater treatment facility was constructed in 1962 to treat radioactive wastewater from nuclear research conducted at LANL. From 1962 to 1971, LANL disposed of sludge resulting from this treatment at TA-54, Area G. In 1971, as directed by the Atomic Energy Commission, LANL began packaging sludge in 55-gallon steel drums and placing them in retrievable storage units at TA-54, Area G. From 1971 to 1982, all sludge from TA-50 was classified as transuranic (TRU) waste. Because of limited storage capacity for TRU waste, LANL constructed a pre-treatment unit at TA-50, Building 1, Room 60 in 1982 to remove transuranium, alpha-emitting radioisotopes from TRU-concentrated wastewater. This had the effect of reducing the rate of TRU waste generated from TA-50 by a factor of 10. In 1982, therefore, TA-50 began generating small quantities of TRU pre-treatment sludge and large quantities of low-level treatment sludge. LANL disposed low-level treatment sludge at TA-54, Area G from 1982 to mid-1986.

allow disposal

As a result of the Environment Protection Agency's (EPA) decision on July 3, 1986, to regulate the hazardous waste component of waste containing source, by-product, or special nuclear material (i.e., mixed waste), LANL began managing TA-50 sludge as low-level mixed waste. From late 1986 to September 1992, 55-gallon steel containers holding TA-50 sludge were placed in TA-54, Area G, Building 49 at a rate of 240-300 containers per year.

In 1991, as a result of efforts to eliminate rinsewater being discharged to Mortandad Canyon through an NPDES permitted outfall, LANL redirected the rinsewater originating in LANL's laboratory electroplating shop in Building SM-66 of TA 3 from the outfall to



a line connected to the TA-50 wastewater treatment facility. The laboratory electroplating shop contains plating tanks, cleaning baths, and rinse tanks associated with the electroplating operations. The rinsewater was combined in the transfer line with large volumes of wastewater generated from other LANL operations.

Data collected from May 1, 1992, through September 30, 1992, showed only trace organic compounds, toxicity characteristic metals, and cyanide. Consequently, LANL began disposing low-level wastewater treatment sludge at TA-54, Area G in Pit 37 in October, 1992, and this practice continued through April, 1993. Over the October, 1992 - April, 1993 timeframe, 308 fifty-five gallon drums containing TA-50 sludge were disposed in Pit 37 as low level radioactive waste.

From May 1993 to August 1993 no sludge was disposed of at Area G. The practice was altogether discontinued based on concerns that were raised during the NMED\NEIC inspection in August, 1993, over the effect the contribution of wastewaters from the laboratory electroplating shop could have on the character of the sludge generated at TA-50

LANL has considered the concerns expressed during the inspection and has concluded, based on 2 similar but separate lines of reasoning, that the F006 waste listing should not be applicable to the 308 drums of sludge generated at TA-50. LANL will cite authority for each line of reasoning.

III. REASONING

40 C.F.R. § 261.31 includes in its list of hazardous wastes from non-specific sources "wastewaters treatment sludge from electroplating operations" [subject to 6 stated exceptions in the definition]. This definition does not address electroplating wastewaters that are mixed or blended with other wastewaters, or specify a threshold concentration percentage (e.g. ten percent or more electroplating wastewater). The F001-F005 listings contains both. Attached please see the listing for F001-F006. If EPA had intended to address blends or mixtures of wastewater in its definition of F006, it clearly could have done so, as evidenced by the language used to describe F001-F005. Indeed, the latter listings were amended to specifically include blends or mixtures, while the F006 was left unchanged.

The vast majority of the volume of wastewaters treated at TA-50 during the timeframe at issue, October, 1992 - April, 1993, originated from non-electroplating sources. These volumes of non-electroplating wastewaters were mixed with the rinsewaters from the laboratory electroplating shop before treatment. The F006 definition by its own terms does not extend to the sludge generated from the treatment of these mixed wastewaters. The 7th Circuit Court of Appeals has found such a line of reasoning persuasive when examining the issue of what constitutes an F006 and concluded that F006 does not include

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sludge that is generated from the treatment of a blend of wastewaters. Please see U.S. v. Bethlehem Steel Corporation, 1994 WL518913 (7th Circuit (Ind)) a copy of which is attached hereto.

The F006 listing for sludge generated from electroplating rinsewaters has also been shown to be inapplicable when considering the mixture rule. The State of Tennessee has found that because Oak Ridge National Laboratory's (ORNL) electroplating rinsewaters were low in volume and concentrations of hazardous constituents, the intent of the mixture rule exemption for laboratory wastewater could be met (see attached letter dated March 28, 1994). This exemption provides that, given an annualized average flow < than or = to 1% of the total, or a concentration < than or = to 1 part per million (ppm) of toxic wastewaters from laboratory operations into the headworks of a wastewater treatment system, wastewaters typically considered listed waste mixtures would not be hazardous. This determination is based on the assumption that certain waste mixtures contain such low concentrations of listed waste as to pose little threat to human health or the environment. Even though the electroplating wastewaters discharged to ORNL's wastewater treatment system, while not listed hazardous waste, could potentially generate sludge meeting the F006 listing description, the State of Tennessee determined that the mixture rule exemption applies to both rinsewaters and sludge.

The process that generates the electroplating rinsewaters at ORNL is similar to that which discharged into TA 50, Building 1 (TA-50-1). The concentrations of hazardous constituents in the rinsewaters from which the sludge at TA-50-1 was generated were also found to be low - in fact, significantly below the 1 ppm limit of the mixture rule exemption. Hence, the same interpretation of the mixture rule exemption can be applied to these rinsewaters and sludge.

For the above stated reasons, LANL believes that the TA-50 sludge should not and did not constitute a listed hazardous waste.

§ 261.31

of wastes listed in this subpart by employing one or more of the following Hazard Codes:

- Ignitable Waste (I)
- Corrosive Waste (C)
- Reactive Waste (R)
- Toxicity Characteristic Waste .. (E)
- Acute Hazardous Waste (H)
- Toxic Waste (T)

Appendix VII identifies the constituent which caused the Administrator to list the waste as a Toxicity Characteristic Waste (E) or Toxic Waste (T) in §§ 261.31 and 261.32.

(c) Each hazardous waste listed in this subpart is assigned an EPA Hazardous Waste Number which precedes

40 CFR Ch. I (7-1-93 Edition)

the name of the waste. This number must be used in complying with the notification requirements of Section 3010 of the Act and certain recordkeeping and reporting requirements under parts 262 through 265, 268, and part 270 of this chapter.

(d) The following hazardous wastes listed in § 261.31 or § 261.32 are subject to the exclusion limits for acutely hazardous wastes established in § 261.5: EPA Hazardous Wastes Nos. F020, F021, F022, F023, F026, and F027.

[45 FR 33119, May 19, 1980, as amended at 48 FR 14294, Apr. 1, 1983; 50 FR 2000, Jan. 14, 1985; 51 FR 40636, Nov. 7, 1986; 55 FR 11863, Mar. 29, 1990]

§ 261.31 Hazardous wastes from non-specific sources.

(a) The following solid wastes are listed hazardous wastes from non-specific sources unless they are excluded under §§ 260.20 and 260.22 and listed in appendix IX.

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Generic:		
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)*
F004	The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F005	The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I, T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	(T)
F007	Spent cyanide plating bath solutions from electroplating operations	(R, T)

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Environmental Protection Agency

Industry and EPA hazardous waste No.	
F008	Plating bath residue where cyanide
F009	Spent stripping cyanides are used
F010	Quenching bath cyanides are used
F011	Spent cyanide solutions
F012	Quenching waste cyanides are used
F019	Wastewater treatment from zircon is an exclusive component in a used to produce from the product
F020	Wastes (except from the product component in a used to produce from the product
F021	Wastes (except from the product component in a used to produce from the product
F022	Wastes (except from the product component in a used to produce from the product
F023	Wastes (except from the product component in a used to produce from the product
F024	Process wastes, including reactor cleaning and reactor hydrocarbons by hydrocarbons are those with varying does not include wastes listed in § 261
F025	Condensed light ends from the production of chlorine processes. Chlorine lengths ranging from chlorination of chlorine su
F026	Wastes (except from the production use (as a reactant) of tetra-, penta-, and hexachlorophenols.
F027	Discarded unused from chlorophenols. (This Hexachlorophene component).
F028	Residues resulting from with EPA Hazardous Wastewaters (except th
F032	Wastewaters (except th nants), process residues preserving processes used chlorophenolic that have had the FO chapter or potentially listed as hazardous waste resume or initiate use K001 bottom sediment serving processes that
F034	Wastewaters (except th nants), process residues preserving processes g ing does not include wastewater from wox pentachlorophenol.

UNITED STATES of America, Plaintiff-Appellee,
v.
BETHLEHEM STEEL CORPORATION,
Defendant-Appellant.

No. 93-2260.

United States Court of Appeals,
Seventh Circuit.

Argued October 26, 1993.

Decided September 26, 1994.

Appeal from the United States District Court for the Northern District of Indiana, Hammond Division. No. 90 C 326 Rudy Lozano, Judge.

Before ESCHBACH, RIPPLE, and KANNE, Circuit Judges.

KANNE, Circuit Judge.

*1 The United States brought this penal enforcement action on behalf of the United States Environmental Protection Agency ("EPA") against Bethlehem Steel Corporation to enforce hazardous waste requirements under the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. secs. 6901-6992k, and the Safe Drinking Water Act ("SDWA"), 42 U.S.C. secs. 300f-300j-26.

Bethlehem Steel Corporation owns and operates an integrated steelmaking facility at Burns Harbor, Indiana. The United States alleges that a series of environmental violations have occurred (and continue to occur) at Burns Harbor. More specifically, the government's complaint asserts six claims for injunctive relief and civil penalties in connection with two types of "solid" waste [FN1] generated by the facility. The government's first claim concerns the plant's generation of waste ammonia liquor. Bethlehem disposes of waste ammonia liquor by channelling it through pipes, then forcing it down under pressure into two Class I underground injection wells at the plant site. The government's **second through sixth** claims pertain to sludges the plant previously generated from the treatment of electroplating and other wastewaters. These sludges are currently stored or disposed of in two finishing lagoons and a landfill, also at the plant

site.

Both parties moved for partial summary judgment on the six claims. The district court granted partial summary judgment in favor of the United States on all the claims and denied Bethlehem's motions. In its Memorandum Opinion and Order, the district court issued a permanent injunction, ordering Bethlehem to comply with its hazardous waste obligations under the two statutes. [FN2] Bethlehem appeals from the district court's decision.

I. BACKGROUND

RCRA establishes a comprehensive federal "cradle-to-grave" program regulating the generation, transportation, storage, treatment, and disposal of hazardous waste. Section 3005(a) of RCRA, 42 U.S.C. sec. 6925(a), generally prohibits the operation of hazardous waste management facilities or units, except in accordance with a RCRA permit or with established interim status requirements. All of Bethlehem's problems in this case arise either from the company's alleged failure to follow the conditions of a valid permit or to comply with interim status regulations.

A. United States' First Claim for Relief

Bethlehem's ammonia waste liquor is a characteristic "hazardous waste" within the meaning of 42 U.S.C. sec. 6903(5). Therefore, pursuant to 42 U.S.C. sec. 6925(a), Bethlehem must heed RCRA's permit requirements for hazardous waste management before it may legally dispose of the ammonia in its underground injection wells. In certain instances, RCRA allows an owner or operator of a hazardous waste facility to satisfy RCRA permit obligations through compliance with provisions promulgated under environmental statutes other than RCRA. In this case, the operator of an underground injection well into which hazardous wastes are injected satisfies its RCRA hazardous waste permit obligations by obtaining and complying with an Underground Injection Control ("UIC") permit, which it is in turn required to have under the SDWA. [FN3] 40 C.F.R. sec. 270.60.

*2 In 1976, Congress enacted the SDWA to protect the nation's drinking water sources. Section 1421 of the SDWA, 42 U.S.C. sec. 300h, and its implementing regulations establish the minimum

---F.3d---

(Cite as: 1994 WL 518913, *2 (7th Cir.(Ind.)))

requirements for state UIC programs governing underground injection wells. In Indiana, the applicable UIC program for Class I injection wells is administered by the EPA and consists of federal UIC regulations. [FN4]

On September 30, 1985, the EPA issued Bethlehem two UIC permits under the SDWA, authorizing it to dispose of its ammonia liquor in the facility's underground injection wells. The permits, however, were conditioned upon Bethlehem's performance of a three phase corrective action program for all of the solid waste management units on its property. Phase I (Preliminary Assessment) required Bethlehem to submit an initial assessment report no later than 45 days after the effective date of the permit. Phase II (Corrective Action Plan) required Bethlehem to submit, within six months of the effective date of the permit, a corrective action plan to ameliorate any hazardous releases. Phase III (Corrective Action Implementation) obliged Bethlehem to implement its corrective action plan within 36 months of the effective date of the permit. The United States alleges that Bethlehem violated the permit requirements of both RCRA and SDWA by failing to perform any phase of the corrective action program according to the schedule prescribed by the UIC permits.

B. United States' Second through Sixth Claims for Relief

In its second through sixth claims for relief, the United States alleges that Bethlehem violated RCRA by failing to comply with RCRA "interim status performance standards" for its landfill and two terminal polishing lagoons.

From the mid-1960's until June 16, 1983, Bethlehem conducted tin and chromium electroplating at its Burns Harbor facility, generating electroplating wastewater as a by-product. Bethlehem treated this electroplating wastewater by, among other things, mixing it with other kinds of wastewaters, then adding a flocculent or thickener and allowing the resulting solids to settle to the bottom as sludge. After the clarified water was drawn off, the sludge was filtered. The clarified water was sent to two terminal polishing lagoons to allow further settling and to allow the temperature and chemical composition of the water to equilibrate. The filtered sludge was disposed of

in the landfill. The United States contends that because 40 C.F.R. sec. 261.31 lists "wastewater-treatment sludges from electroplating operations" as F006 hazardous waste, Bethlehem's landfill and lagoons are "hazardous waste management units" subject to 42 U.S.C. sec. 6925(a)'s permit requirements.

Issue is whether permit is required

In enacting RCRA, Congress recognized that the EPA could not issue permits to all applicants before RCRA's effective date. Thus, RCRA provides that facilities already in existence on November 19, 1980, could continue to manage hazardous waste without a permit on an "interim status" basis, until the EPA made a final administrative disposition of their submitted permit applications. 42 U.S.C. sec. 6925(e). To obtain interim status, existing facilities were required to submit a "Part A application" by a certain date and then were to be "treated as having been issued [a] permit." 42 U.S.C. sec. 6925(e).

*3 Such facilities nonetheless were required to conduct their hazardous waste management in compliance with the "interim status standards" set forth at 40 C.F.R. sec. 265. In the last five counts of its complaint, the government alleges that Bethlehem did not meet its interim status obligations to (1) comply with closure and postclosure requirements, (2) implement a groundwater monitoring system, (3) establish financial assurance for closure and postclosure care of each of its units, (4) implement a run on control system for the landfill, and (5) submit a Part B application as requested by the Indiana Department of Environmental Management. [FN5]

The district court agreed with the government and granted partial summary judgment on all six of the United States' claims, holding Bethlehem liable for injunctive relief and civil penalties not to exceed \$25,000 per day of violation for each of Bethlehem's violations. The court's memorandum opinion contained an injunction ordering Bethlehem to comply with the corrective action requirements of its UIC permit, and with the interim status requirements for its terminal polishing lagoons and landfill. [FN6]

II. DISCUSSION

We review grants of summary judgment de novo to determine whether any genuine issue of material

fact exists and whether the moving party is entitled to judgment as a matter of law. *Cathedral of Joy Baptist Church v. Village of Hazel Crest*, 22 F.3d 713, 716 (7th Cir. 1994). On appeal, Bethlehem raises numerous defenses to liability, and we examine their arguments with regard to the UIC permits and to the landfill and polishing lagoons in order.

A. Underground Injection Control Permits

Bethlehem contends that it is not liable for violating RCRA and SDWA by continuing to operate its underground injection wells without abiding by the corrective action conditions of the wells' UIC permits. First, it maintains that the government's first claim against it is moot, because the EPA has itself already completed Phase I of the corrective action program for Bethlehem by preparing a "RCRA Facility Assessment" ("RFA") report on the Burns Harbor facility. [FN7] Second, Bethlehem submits that it was unreasonable for the EPA to expect it to complete the corrective action program according to schedule because the corrective action deadlines were impossible to meet and were imposed "in a boilerplate fashion" contrary to EPA's own policies. The district court held that neither the unreasonableness of the EPA's deadlines nor the impossibility of compliance with them is a defense to an enforcement action. **We agree that Bethlehem is not excused from complying with its permit obligations.**

First, Bethlehem's argument that the United States' claim has been rendered moot because of the EPA's RFA report is wholly meritless. As the government points out in its brief, even if the EPA's RFA had contained the precise information that Bethlehem was required to submit under Phase I of its corrective action program, the preparation of the RFA by the EPA would not have relieved Bethlehem's obligation to perform its own preliminary assessment report. **Bethlehem's mootness argument is further belied by the fact that in July 1990, it did begin to submit its own preliminary assessment report, regardless of the existence of the RFA.** Therefore, we conclude that Bethlehem was required to submit a preliminary assessment report regardless of the EPA's RFA report. [FN8]

*4 Bethlehem's assertion of an impossibility

defense is likewise unavailing. The district court concluded that the "impossibility defense" is no defense to this type of action brought under RCRA. Ample case law exists to support the district court's conclusion. In *United States v. Production Plated Plastics, Inc.*, 742 F. Supp. 956 (D. Mich. 1990), op. adopted by 955 F.2d 45 (6th Cir.), cert. denied, U.S. , 113 S. Ct. 67 (1992), the court held that neither impossibility nor good faith efforts to secure financial assurances are defenses to liability for failure to do so under RCRA. [FN9] *Id.* at 961-62 (citing *United States v. Clow Water Sys.*, 701 F. Supp. 1345, 1348 (S.D. Ohio 1988); *United States v. Allegan Metal Finishing Co.*, 696 F. Supp. 275, 285 (W.D. Mich. 1988); *United States v. T & S Brass and Bronze Works, Inc.*, 681 F. Supp. 314 (D.S.C.), aff'd in part and vacated in part on other grounds, 865 F.2d 1261 (4th Cir. 1988)).

We need not decide here whether an impossibility defense may be successfully asserted in RCRA actions, for in this case, we agree with the district court that it was not impossible for Bethlehem to meet the corrective action deadlines. The court found that Bethlehem could have "complained earlier about the restrictive time schedule, and the EPA and the Defendant could have modified the time schedule to assure compliance by the Defendant." By definition, where there is a possible alternative, there is no impossibility. See *T & S Brass*, 681 F. Supp. at 321 (stating that because an operator could always stop operating a surface impoundment or else cease its business, it was not impossible to comply with a RCRA deadline).

Although Bethlehem lodged objections on several occasions to the corrective action conditions, never did it challenge the allotted time for compliance or ask for an extension. In a letter dated October 2, 1985, Bethlehem informed the EPA that it "intend[ed] to comply with the 'Preliminary Assessment' requirements in Attachment F of the UIC permit in accordance with the specified schedule." On November 15, 1985, Bethlehem filed an administrative appeal with the EPA challenging the validity of the UIC permits, but not the time frame for compliance embodied in them. [FN10]

The EPA denied Bethlehem's administrative appeal on January 19, 1989, and the permits became effective as a final agency action on that date. Bethlehem then appealed the EPA's decision to this

court, asking for a stay of the applicability of the permits pending our decision. We refused. We subsequently upheld the validity of the UIC permits in *Inland Steel Co. v. EPA*, 901 F.2d 1419 (7th Cir. 1990). The EPA notified Bethlehem and the State of Indiana of the UIC permit violations on April 19, 1990. Three more months passed from the date of the EPA's notice before Bethlehem initiated steps to submit the Phase I preliminary assessment.

Like the district court, we are troubled by Bethlehem's extended history of inaction. Bethlehem did not attempt compliance until long after the corrective action deadlines had passed. In any event, Bethlehem has known since 1985 that it likely had to submit a preliminary assessment according to schedule, and was under a continuing obligation to do so ever since January 19, 1989. Bethlehem cannot first agree to the EPA's corrective action deadlines, refrain from asking for a modification, wait until the deadlines have long passed before even attempting compliance, then assert in an enforcement action that it was excused from compliance because the time frames were unreasonable or impossible. As the court stated in *T & S Brass and Bronze*, "a facility cannot, by its own actions, make itself [unable to meet RCRA's requirements] and then claim 'impossibility' as a defense to liability under RCRA sec. 3005(e)." 681 F.2d at 321. The district court correctly rejected Bethlehem's defenses in connection with the UIC permits and properly granted partial summary judgment in favor of the United States on its first claim.

*5 Lastly, Bethlehem argues generally that the district court erred by issuing a permanent injunction against it without conducting a balancing of equities or considering whether irreparable harm would result if the injunction were not granted. [FN11]

Ordinarily, a court is obligated to conduct an equitable balancing of harms before awarding injunctive relief, even under an environmental statute which specifically authorizes such relief (as does RCRA section 3008(a)). The Supreme Court has explained that so long as the statute does not evidence a congressional intent to deny courts their traditional equitable discretion, courts must undertake such a balancing analysis. See *Amoco Prod. Co. v. Village of Gambell*, 480 U.S. 531, 107

S. Ct. 1396 (1987); *Weinberger v. Romero Barcelo*, 456 U.S. 305, 102 S. Ct. 1798 (1982). We believe, however, that with regard to the UIC permits in this case, the district court properly ordered injunctive relief against Bethlehem without under taking a weighing of the equities or making a finding of irreparable harm.

First, in *EPA v. Environmental Waste Control*, 917 F.2d 327 (7th Cir. 1990), cert. denied, 499 U.S. 975, 111 S. Ct. 1621 (1991), we upheld a permanent injunction against the operation of an interim status landfill in an enforcement action under RCRA. We noted in that case that "[i]t is an accepted equitable principle that a court does not have to balance the equities in a case where the defendant's conduct has been willful." *Id.* at 332 (citing *Guam Scottish Rite Bodies v. Flores*, 486 F.2d 748, 749 (9th Cir. 1973)). In its order denying Bethlehem's Motion to Rescind the Court's Injunction and/or Stay the Injunction Pending Appeal and Administrative Hearings, the district court, in this case, stated that there was "no doubt that [it had] found that the Defendant's conduct has been willful."

Furthermore, we also observed in *Environmental Waste Control* that

the law of injunctions differs with respect to governmental plaintiffs (or private attorneys general) as opposed to private individuals. Where the plaintiff is a sovereign and where the activity may endanger the public health, "injunctive relief is proper, without resort to balancing." *Illinois v. [City of] Milwaukee*, 599 F.2d 151, 166 (7th Cir. 1979), rev'd on other grounds, 451 U.S. 304, 101 S. Ct. 1784 (1981). Second, in cases of public health legislation, the emphasis shifts from irreparable injury to concern for the general public interest....

Id. (quoting *Environmental Def. Fund, Inc. v. Lamphier*, 714 F.2d 331, 337-38 (4th Cir. 1983)). Here, not only is the plaintiff the United States, but the activity in question is the underground disposal of a characteristic hazardous waste. RCRA section 1002(b)(2) declares that "disposal of ... hazardous waste in or on the land without careful planning and management can present a danger to human health and the environment."

For these reasons, we conclude that with regard to the part of the injunction pertaining to Bethlehem's

UIC permits, there was a lesser need for a balancing analysis. Thus, it was not improper for the district court to have awarded injunctive relief against Bethlehem without conducting an equitable balancing.

B. Landfill and Polishing Lagoons

*6 Bethlehem next argues that the district court erred in granting partial summary judgment in favor of the government on its second through sixth claims. It advances a plethora of arguments as to why it is not liable for failing to comply with RCRA's interim status performance standards for its two terminal polishing lagoons and its landfill. We, however, need only address one of Bethlehem's arguments to reach our decision regarding the government's interim status claims.

As we previously discussed, RCRA section 3005's permit requirements apply to the treatment, storage, and disposal of hazardous wastes. Wastes are considered hazardous, and therefore subject to RCRA's subtitle C permit requirements, if they fit one of two categories. First, they may be "characteristic" hazardous wastes, meaning they possess one of the four hazardous characteristics of ignitability, corrosivity, reactivity, or toxicity. 40 C.F.R. sec. 261, subpart C. Second, the EPA may deem wastes hazardous by rulemaking. These wastes are known as "listed wastes." See id. [FN8] 261, subpart D. Listed wastes remain hazardous waste until the EPA approves a petition for its "delisting." See 40 C.F.R. secs. 260.20, 260.22; *Chemical Waste Management, Inc. v. EPA*, 976 F.2d 2, 8 (D.C. Cir. 1992), cert. denied sub nom. *Chemical Mfrs. Ass'n v. EPA*, U.S. , 113 S. Ct. 1961 (1993).

~~The United States maintains that the settled sludge at the bottom of Bethlehem's finishing lagoons and the filtered sludge disposed of in its landfill are F006 listed waste, because the sludges are properly classified as "wastewater treatment sludges from electroplating operations."~~ See 40 C.F.R. sec. 261.31. The government advances two bases under which Bethlehem's sludges should be considered regulated F006 waste.

First, it argues that the language of the F006 listing itself "wastewater treatment sludges from electroplating operations" contemplates "mixed"

sludges like Bethlehem's (i.e., those resulting from the treatment of waste waters which came in part from electroplating operations). Second, it argues that even if the language of the F006 listing does not cover "mixed" electroplating sludges, the regulation should still be read consistently with the " 'general principle [underlying RCRA] that a hazardous waste does not lose its hazardous character simply because it changes form or is combined with other substances.' " To fail to do so, the government warns, would effectively gut RCRA.

If Bethlehem's sludges are listed waste, they would be considered hazardous until delisted. Bethlehem's sludges were not delisted; therefore, Bethlehem's lagoons and landfill would be subject to RCRA's section 3005 interim status requirements, if indeed they contain F006. (Recall that Bethlehem was a pre November 19, 1980 facility with a permit application pending with the EPA and was thus qualified to be an interim status facility). Bethlehem has failed to meet a slew of the EPA's interim status standards, 40 C.F.R. sec. 265; thus, if the government's arguments are correct, Bethlehem would potentially be liable for injunctive relief and penalties.

*7 Bethlehem attempts to refute the government's arguments by (1) asserting that the F006 listing, by its terms, applies only to sludge from pure electroplating wastewaters; and (2) referring us to *Shell Oil v. EPA*, 950 F.2d 741 (D.C. Cir. 1991), to support the proposition that its waste water treatment sludge is not F006 listed waste because it has been mixed with other solid wastes. LAWL

We agree with Bethlehem on both points. We must first acknowledge that the plain language of the F006 listing is not particularly instructive in this case. Although the district court notes that "the term 'wastewater treatment sludges from electroplating operations' does not have the words 'solely', 'only', or 'exclusively' in it, to imply that only wastewater treatment sludges from electroplating operations and not a mixture thereof is hazardous waste," we are equally persuaded by Bethlehem's observation that the listing also "does not contain the words, 'partly,' 'mixed with,' or 'in trace amount' either."

Similarly, we find it significant that the F006 listing lacks the phrase "mixtures/blends," or any

mention of a threshold concentration percentage (for instance, ten percent or more electroplating wastewater). The F001-F005 listings immediately preceding F006 contain both. [FN12] A facility may reasonably infer that when the EPA intends to include waste mixtures in its listings, it knows how to do so, and that in the F006 listing, **such mixture language is conspicuously absent**. Subsequently, the EPA explicitly "amend [ed] ... [the F001-F005] spent solvent listings to include solvent mixtures," 40 C.F.R. sec. 271.1 (table 1); 50 Fed. Reg. 53318 (December 31, 1985) ("Today's amendment will close a major regulatory loophole which allows toxic solvent mixtures to remain unregulated."), **but did not amend the F006 listing to include electroplating waste water mixtures.**

Finally, the EPA's statement at 45 Fed. Reg. 33095 (May 19, 1980), with regard to its promulgation of the "mixture rule," provides the last clue that tips our construction of the F006 listing in Bethlehem's favor. The EPA there stated:

1. What is hazardous waste?

Paragraph (a) of this section defines what a hazardous waste is. It provides that a solid waste is a hazardous waste if ... it either (1) is listed as a hazardous waste in Subpart D, (2) is a waste mixture containing one or more hazardous wastes listed in Subpart D.... * * * Although it was not expressly stated in the proposed regulation, EPA intended waste mixtures containing listed hazardous wastes to be considered a hazardous waste and managed accordingly. Without [the mixture] rule, generators could evade Subtitle C requirements simply by commingling listed wastes with nonhazardous solid waste.... Obviously, this would leave a major loophole in the Subtitle C management system and create inconsistencies in how wastes must be managed under that system.

45 Fed. Reg. 33095 (May 19, 1980) (emphasis added). Thus, the EPA itself seems to concede that although it meant to include waste mixtures in the Subpart D listings, **without a separate rule specifying that such mixtures are hazardous, the language of the listing itself fails to reach such mixtures. We conclude that the F006 listing does not, independent of the mixture rule, include Bethlehem's mixed wastewater treatment sludges.**

*8 Bethlehem is also correct that its sludges are

not listed F006 waste because the Shell Oil case invalidated the mixture rule. We must preface our discussion here with a word of background.

When the EPA published its proposed regulation regarding the definition of hazardous waste, it did not include the mixture rule in the definition. Nevertheless, when the EPA published its final regulations, it promulgated the mixture rule at 40 C.F.R. sec. 261.3(a)(2)(ii) as part of the final rule. In pertinent part, the final rule provided:

sec. 261.3 Definition of hazardous waste.

(a) A solid waste, as defined in sec. 261.2, is a hazardous waste if:

* * * (2) It meets any of the following criteria:

(i) It is listed in Subpart D and has not been excluded from the lists in Subpart D under 260.20 and 260.22 of this Chapter.

(ii) It is a mixture of solid waste and one or more hazardous wastes listed in Subpart D and has not been excluded from this paragraph under [FN8] 260.20 and 260.22 of this Chapter.

(mixture rule emphasized).

In Shell Oil, the District of Columbia Circuit held that because the rule did not appear in the proposed regulations, the EPA had failed to give sufficient notice and opportunity for comment in promulgating the mixture rule. The court vacated and remanded the rule to the EPA, suggesting that "in light of the dangers that may be posed by a discontinuity in the regulation of hazardous wastes, ... the agency may wish to consider reenacting the rule[], in whole or part, on an interim basis under the 'good cause' exemption to 5 U.S.C. sec. 553(b)(3)(B) pending full notice and opportunity for comment." Id. at 752 (citation omitted).

As we have noted, by later promulgating a separate mixture rule at subsection (a)(2)(ii), the EPA appears to have anticipated that the simple listing of a waste would subject to regulation only those facilities that managed the waste in pure form. In Shell Oil, the court described the regulatory history of the rule, noting that the

EPA acknowledged at the outset that the mixture rule was "a new provision," and that it had no "direct counterpart in the proposed regulations." 45 Fed. Reg. 33,095. Nevertheless, it added the rule "for purposes of clarification and in response to questions raised during the comment period concerning waste mixtures and when [they] cease

to be subject to the Subtitle C ... management system." Id.... [T]he EPA stated that it had "intended" to treat waste mixtures containing Subpart D wastes as hazardous. It then presented the mixture rule as necessary to close "a major loophole in the Subtitle C management system." Id. 33,095. Otherwise generators of hazardous waste "could evade [those] requirements simply by commingling [Subpart D] wastes with nonhazardous solid waste" to create a [non-listed] waste that ... posed a hazard....

Shell Oil, 950 F.2d at 749. The court held, however, that regardless of the EPA's unexpressed intentions, the mixture rule was not a "logical outgrowth" of the EPA's proposed regulations, and that it therefore could not find that interested parties had received "implicit notice" of the mixture rule from the proposed regulations. Id. at 751-52. The court further observed that a "shift in strategy" between the EPA's proposed regulations and the final rule "erod [ed] the foundation of the EPA's argument that the mixture rule was implicit in the proposed regulations." It stated:

*9 A system that would rely primarily on lists of wastes and waste producing processes might imply inclusion of a waste until it is formally removed from the list. The proposed regulations, however, did not suggest such a system. Rather, their emphasis on characteristics suggested that if a waste did not exhibit the nine characteristics originally proposed, it need not be regulated as hazardous. We conclude, therefore, that the mixture rule was neither implicit in nor a "logical outgrowth" of the proposed regulations.

Id. at 752 (emphasis added).

In its brief, the United States argues to this court the very theory explicitly rejected by Shell Oil. The government states, "The regulation of these [mixed wastes] is not a result of the application of specific rules such as the 'mixture rule,' but a result of application of the more general principles and provisions embodied in these rules." And further, "The RCRA 'continuing jurisdiction' principle means only that the hazardous waste portion of the mixture is subject to regulation i.e., that one cannot hide waste or change its hazardous character by mixing it into a pile of nonhazardous waste." ~~The~~ **government, in essence, urges us to reach a conclusion directly at odds with the reasoning in Shell Oil; namely, that the EPA may reach mixed wastes without relying on the mixture rule, because**

the principles underlying the rule are implicit in the Subpart D listings and the final rule, stripped of the invalidated mixture provision.

This we decline to do. We find the reasoning of the Shell Oil opinion persuasive on the point that the regulation of waste mixtures is simply not a logical outgrowth of the proposed definition of hazardous waste, and that without the explicit mixture rule, the definition leaves a major loophole through which waste mixtures could slip. Therefore, we must reject the notion that the policy behind the mixture rule is "embodied" as a general principle within the definition and that such a principle may operate to reach wastes that would have been covered by the mixture rule, but for its invalidation.

Finally, we determine that no "principle of continuing jurisdiction" is applicable to this case. **The principle of continuing jurisdiction applies not to mixtures of hazardous and nonhazardous solid wastes, but to mixtures of hazardous waste and environmental media, such as soil and groundwater.** See Chemical Waste Management, Inc. v. EPA, 869 F.2d 1526 (D.C. Cir. 1989). In Chemical Waste Management, **the court adopted the agency's position regarding environmental media contaminated by hazardous waste.** The agency's position was "that hazardous waste cannot be presumed to change character when it is combined with an environmental medium, and that the hazardous waste restrictions therefore continue to apply to waste which is contained in soil or groundwater." Id. at 1539. The court went on to state, however, that "[t]he EPA's approach to contaminated soil is also ... entirely consistent with the agency's general regulatory framework, which emphasizes that a continuing presumption of hazardousness attaches to hazardous waste which changes form or is combined with other substances." Id. at 1540-41.

*10 Ironically, the court deduced that such a "coherent regulatory framework" existed, partly because of the now invalid mixture and "derived from" rules. [FN13] Id. at 1539-40. It noted that "[p]recisely the same logic" that underlies the mixture and derived from rules applies to the conclusion that the EPA has continuing jurisdiction over combinations of hazardous waste and environmental media.

Because the mixture and derived from rules were invalidated in Shell Oil, the government's attempt to use the principle of continuing jurisdiction here to buttress its claim regarding Bethlehem's mixed wastes constitutes bootstrapping. We conclude that Bethlehem's wastewater treatment sludges cannot be F006 listed waste by virtue of the principle of continuing jurisdiction.

CONCLUSION

Bethlehem violated RCRA and SDWA by failing to comply with the corrective action conditions required by the two UIC permits for its underground injection wells. Therefore, we AFFIRM the district court's grant of partial summary judgment and injunctive relief against Bethlehem on the United States' first claim.

On the other hand, Bethlehem's wastewater treatment sludges do not fall within the listing for F006 hazardous waste. The parties agree that the sludges are a mixture of F006 and nonhazardous waste, and the government does not allege that Bethlehem's sludges are hazardous waste by virtue of any theory other than its listing as F006 waste. As such, the sludges in Bethlehem's two lagoons and landfill are not subject to RCRA subtitle C requirements as a listed hazardous waste. We therefore VACATE the portion of the district court's opinion that grants partial summary judgment and injunctive relief against Bethlehem on the United States' second through sixth claims, and REMAND the case with instructions to enter partial summary judgment in favor of Bethlehem with regard to those five claims.

RIPPLE, Circuit Judge, concurring in part and dissenting in part.

This is a difficult case and my colleague has crafted a careful and thoughtful opinion. I am pleased to join all but one aspect of it.

I believe that the sludge at the bottom of Bethlehem's finishing lagoons and the filtered sludge in its landfill are properly classified as F006 listed waste because these sludges are "wastewater treatment sludges from electroplating operations." 40 C.F.R. sec. 261.31. In my view, the agency's description is very clear and further specificity is not required. I note that the F006 listing specifically

eliminates from its scope sludges produced by certain processes. If the agency believed that other exclusions, based for instance on the percentage of the sludge attributable to hazardous waste, were appropriate, it would have included such a specification.

FN1. Under RCRA, the term "solid waste" expressly includes sludges and liquid wastes. 42 U.S.C. sec. 6903(27).

FN2. At the time this appeal was taken, the district court had not entered a final judgment in this case, pending a hearing to assess civil penalties against Bethlehem. Under 28 U.S.C. sec. 1292(a)(1), we have jurisdiction over appeals from interlocutory orders of the district court granting or modifying injunctions. The district court has since resolved the penalties issue and rendered a final judgment in this case. Bethlehem's separate appeal of the civil penalty is currently pending in this court.

FN3. Therefore, by violating the conditions of a single UIC permit, an operator or owner may run afoul of both the SDWA and RCRA.

FN4. These regulations are at 40 C.F.R. secs. 124, 144-46, 147.751.

FN5. This last requirement is found at 40 C.F.R. sec. 270.10, but is a requirement imposed upon interim status facilities.

FN6. The court determined the amount of Bethlehem's civil penalties at a separate hearing held at a later date, see supra note 1.

FN7. The EPA prepared this RFA because it anticipated that Bethlehem would need a separate RCRA permit to operate other hazardous waste management units at the facility. The EPA uses these RFA's to help formulate site specific corrective action measures for a particular applicant before it issues a RCRA permit.

FN8. We additionally observe that even if the RFA report did relieve Bethlehem of its duty to submit a Phase I report, the government's first claim would be far from moot, because it alleges that Bethlehem also failed to complete Phases II and III of the corrective action program.

FN9. The court held, however, that good faith efforts to comply with RCRA's financial responsibility requirements are "pertinent to the appropriate remedies or imposition of sanctions."

FN10. Bethlehem could have requested a modification of the time schedule in the UIC permits. The permit itself states that the "Director may, for cause or upon request from the permittee, modify, revoke and reissue, or terminate this permit" (emphasis added) pursuant to 40 C.F.R. secs. 144.12, 144.39, and 144.40. Cf. *W.R. Grace & Co. v. EPA*, 959 F.2d 360, 361 n.1, 366 & n.13 (1st Cir. 1992) (stating that "if additional time becomes necessary for the completion of an investigative phase task [under a RCRA permit], [a facility] 'can request a modification of the schedule of compliance ... [pursuant to] 40 C.F.R. sec. 270.42,' " and that a denial of such modification is reviewable).

FN11. We address the propriety of injunctive relief here in connection with the government's first claim only. Given our decision on the government's second through sixth claims, we need not and do not reach the issue of whether injunctive relief was the appropriate form of remedy with regard to any other claim in this suit.

FN12. For example, the F004 listing specifies "the following spent nonhalogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above nonhalogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures."

FN13. Notably, the Chemical Waste Management court explained that the petitioners in that case did not challenge the mixture or derived from rules and that it "therefore presume[d] the validity of these rules in the current proceeding, although it recognize [d] that the regulations were the subject of a timely challenge which [wa]s presently pending before th[e] court." That challenge, of course, was *Shell Oil v. EPA*.

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MAR 30 1993



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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Solid Waste Management
Fifth Floor, L & C Tower
401 Church Street
Nashville, Tennessee 37243-1535

March 28, 1994

Ms. Nancy S. Dailey
Martin Marietta Energy Systems
Oak Ridge National Laboratory
Post Office Box 2008
Oak Ridge, Tennessee 37831-6395

Dear Ms. Dailey:

On April 7, 1993, we met and discussed the regulatory status of the sludges generated from the treatment of rinsewaters from Oak Ridge National Laboratory's (ORNL) Printed Circuit and Photometal Laboratory. As a part of the laboratory operations a small amount of electroplating rinsewaters are discharged into the ORNL's Process Waste Treatment Plant (PWTP). We agreed that the discharge of these small quantities of electroplating rinsewaters could, by definition, make the resulting sludge a hazardous waste, but believed it inappropriate for it to do so.

By definition a waste is a hazardous waste if it exhibits a characteristic of hazardous waste, ~~meets a listing description, or is a mixture of waste and one or more listed hazardous wastes~~. The latter portion of the definition has become known as the "mixture rule."

On November 17, 1981, the "EPA recognized that a rule [40 CFR 261.3] designating all waste mixtures containing listed hazardous waste as hazardous could create some unintended results (45 FR 33095)." EPA further explained that "it could, for example, result in some waste mixtures being considered hazardous waste which do not pose a substantial hazard to public health or the environment because they contain only very small amounts of listed hazardous wastes." Therefore, on the same date, the EPA published an interim final rule amending 40 CFR 261.3. Shortly thereafter, the Department amended Rule 1200-1-11-.02(1)(c) to include these changes. As amended, the mixtures identified in 40 CFR 261.3(a)(2)(iv) [Rule 1200-1-11-.02(1)(c)1(ii)(IV)] which the generator could demonstrate consisted of wastewater the discharge of which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act [TCA 69-3-101 et seq.] (including wastewater at facilities which have eliminated the discharge of wastewater) was not hazardous waste by virtue of the mixture rule. One such

Ms. Dailey
Rinsewaters

March 28, 1994
Page two

exempted mixture consists of wastewater resulting from laboratory operations containing [listed] toxic (T) wastes, provided that the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pre-treatment system, or provided the wastes combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pre-treatment facility.

The rinsewaters from electroplating processes are not listed hazardous wastes but the sludges generated from the treatment of these rinsewaters do meet the F006 listing description. The F006 sludges were listing in accordance with the third listing criteria and as such are listed as toxic (T) wastes.

Given the relatively small amount and nature of the rinsewaters discharged into the PWTP, we have concluded that these wastes are similar enough to listed toxic (T) waste to warrant equal consideration under the mixture rule exceptions of subitem (1)(c)1(ii)(IV)V of Rule 1200-1-11-.02. In addition, the sludge generated by the PWTP shall not be considered listed F006 as a result of treating such rinsewaters which, in accordance with this decision, satisfy the quantity limitation of the mixture rule exception cited above.

If you have any further questions, please feel free to call or write.

Sincerely,



Wayne Gregory, Technical Coordinator
Hazardous Waste Program

xc: Tom Perry/Diane Appino
Earl Leming, DOE-O

~~CONFIDENTIAL~~

ITEM 3.

LOS ALAMOS NATIONAL LABORATORY

WASTE PROFILE FORM

~~CONFIDENTIAL~~ GM

EM-8 USE ONLY
Reference Number 04173

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490.

Division/Group EM-7	Telephone 7-4301	Mail Stop E-518	Technical Area 50	Building 1	Room WM-66
---	--	---	---	--	--

Method of Characterization Knowledge of Process (KOP) - OR - Chemical/Physical Analysis (specify below)
 MSDS attached (optional) Request for analysis Analysis attached

Waste Categories (Choose one or more of the categories below that most accurately describes your waste.)

- | | | | | |
|---|---|---|---|--|
| <input type="checkbox"/> Flammable | <input type="checkbox"/> Pesticide | <input type="checkbox"/> Photographic | <input type="checkbox"/> Spent coolant | <input type="checkbox"/> Plastics |
| <input type="checkbox"/> Combustible | <input type="checkbox"/> Beryllium | <input type="checkbox"/> Sanitary | <input type="checkbox"/> Aerosol cans | <input type="checkbox"/> Filter media |
| <input type="checkbox"/> High explosive | <input type="checkbox"/> Asbestos | <input type="checkbox"/> Radiochemistry | <input type="checkbox"/> Motor oil | <input type="checkbox"/> Vacuum filter media |
| <input type="checkbox"/> DOT oxidizer | <input type="checkbox"/> Solvent | <input type="checkbox"/> Paint waste | <input type="checkbox"/> Pump oil | <input type="checkbox"/> Cement paste |
| <input type="checkbox"/> Pyrophoric | <input type="checkbox"/> Waste rags | <input type="checkbox"/> Laboratory trash | <input type="checkbox"/> Capacitor oil | <input type="checkbox"/> Non-salvageable |
| <input type="checkbox"/> Cyanide | <input type="checkbox"/> Glass | <input type="checkbox"/> Metallurgic | <input type="checkbox"/> UST remediation | <input type="checkbox"/> Nonrecyclable |
| <input type="checkbox"/> Heavy metal | <input type="checkbox"/> Plating solution | <input type="checkbox"/> Scrap metal | <input type="checkbox"/> Contaminated soils | <input type="checkbox"/> Building debris |
| <input type="checkbox"/> Corrosive | <input type="checkbox"/> Etchant | <input type="checkbox"/> Medical/Biological | <input type="checkbox"/> Environmental/SWMU | <input type="checkbox"/> Firing site debris |

General Description (Provide a general description of the waste and/or waste-generating process below.)

DIRT, RAGS, TAPE, DEBRIS FROM SUMP IN WM-66
INDUSTRIAL WASTE LINE

Waste Description (Check only one box in each column.)

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
<input type="checkbox"/> Solid	<input type="checkbox"/> < 100°	<input type="checkbox"/> ≤ 2.0	<input type="checkbox"/> Unstable	<input type="checkbox"/> < 50 ppm
<input type="checkbox"/> Semisolid/sludge	<input type="checkbox"/> 100° to 139°	<input type="checkbox"/> 2.1 to 12.4	<input type="checkbox"/> Water reactive	<input type="checkbox"/> 50 to 500 ppm
<input checked="" type="checkbox"/> Absorbed liquid	<input type="checkbox"/> 140° to 200°	<input type="checkbox"/> ≥ 12.5	<input type="checkbox"/> Cyanides	<input type="checkbox"/> > 500 ppm
<input type="checkbox"/> Liquid	<input type="checkbox"/> > 200°	<input checked="" type="checkbox"/> Not aqueous	<input type="checkbox"/> Sulfides	<input checked="" type="checkbox"/> None
<input type="checkbox"/> Gas cylinder or vessel	<input checked="" type="checkbox"/> Not ignitable		<input type="checkbox"/> Shock sensitive	
<input type="checkbox"/> Multilayered			<input type="checkbox"/> Class A or B explosive	
<input type="checkbox"/> Suspended solids			<input checked="" type="checkbox"/> Nonreactive	
<input type="checkbox"/> Powder or ash				

Waste Originator:

- A. Is this waste generated in a radiation controlled area? Yes No
- B. If yes, is the waste generated or accumulated in a properly defined, registered materials management area (RMA)? (RMA# _____) Yes No
- C. If the answer to question A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity <input type="checkbox"/> Nonradioactive	
<input type="checkbox"/> Suspect	<input checked="" type="checkbox"/> Radioactive
Activity Measure	Radiation Type
<input type="checkbox"/> ≤ 2.0 nCi/g	<input checked="" type="checkbox"/> alpha <input type="checkbox"/> gamma
<input type="checkbox"/> > 2.0 nCi/g	<input type="checkbox"/> t ^{1/2} < 20 yr <input type="checkbox"/> tritium
<input type="checkbox"/> > 10.0 nCi/g	<input checked="" type="checkbox"/> t ^{1/2} ≥ 20 yr
<input checked="" type="checkbox"/> > 100.0 nCi/g	<input checked="" type="checkbox"/> beta

WASTE GENERATOR CERTIFICATION: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Waste Generator's Name (last, first, middle) MOSS, Wm. DAVID	Z Number 091973	Signature Wm. David Moss	Date 6-17-93
--	---	--	--

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). -->

Name (last, first, middle) MOSS, Wm. David	Mail Stop E-518
--	---

Toxic Metals (Indicate if any of the following toxic metals are present in your waste at the posted concentrations.)

arsenic	<input checked="" type="checkbox"/> None	<input type="checkbox"/> <5.0 ppm	<input type="checkbox"/> ≥5.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
barium	<input type="checkbox"/> None	<input type="checkbox"/> <100.0 ppm	<input type="checkbox"/> ≥100.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
cadmium	<input checked="" type="checkbox"/> None	<input type="checkbox"/> <1.0 ppm	<input type="checkbox"/> ≥1.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
chromium	<input type="checkbox"/> None	<input type="checkbox"/> <5.0 ppm	<input type="checkbox"/> ≥5.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
lead	<input type="checkbox"/> None	<input type="checkbox"/> <0.2 ppm	<input type="checkbox"/> ≥0.2 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
mercury	<input type="checkbox"/> None	<input type="checkbox"/> <0.2 ppm	<input type="checkbox"/> ≥0.2 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
nickel	<input type="checkbox"/> None	<input type="checkbox"/> <134.0 ppm	<input type="checkbox"/> ≥134.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
silver	<input type="checkbox"/> None	<input type="checkbox"/> <1.0 ppm	<input type="checkbox"/> ≥1.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
thallium	<input type="checkbox"/> None	<input type="checkbox"/> <5.0 ppm	<input type="checkbox"/> ≥5.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other

Organic Compounds (Indicate if any of the following organic compounds are present in your waste at the posted concentrations.)

benzene	<input checked="" type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
carbon tetrachloride	<input type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
chlorobenzene	<input type="checkbox"/> None	<input type="checkbox"/> <100.0 ppm	<input type="checkbox"/> ≥100.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
chloroform	<input type="checkbox"/> None	<input type="checkbox"/> <6.0 ppm	<input type="checkbox"/> ≥6.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
cresol	<input type="checkbox"/> None	<input type="checkbox"/> <200.0 ppm	<input type="checkbox"/> ≥200.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
1,4-dichlorobenzene	<input type="checkbox"/> None	<input type="checkbox"/> <7.5 ppm	<input type="checkbox"/> ≥7.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
1,2-dichloroethane	<input type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
1,1-dichloroethylene	<input type="checkbox"/> None	<input type="checkbox"/> <0.7 ppm	<input type="checkbox"/> ≥0.7 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
2,4-dinitrotoluene	<input type="checkbox"/> None	<input type="checkbox"/> <0.13 ppm	<input type="checkbox"/> ≥0.13 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
hexachlorobenzene	<input type="checkbox"/> None	<input type="checkbox"/> <0.13 ppm	<input type="checkbox"/> ≥0.13 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
hexachlorobutadiene	<input type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
hexachloroethane	<input type="checkbox"/> None	<input type="checkbox"/> <3.0 ppm	<input type="checkbox"/> ≥3.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
methyl ethyl ketone	<input type="checkbox"/> None	<input type="checkbox"/> <200.0 ppm	<input type="checkbox"/> ≥200.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
nitrobenzene	<input type="checkbox"/> None	<input type="checkbox"/> <2.0 ppm	<input type="checkbox"/> ≥2.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
pentachlorophenol	<input type="checkbox"/> None	<input type="checkbox"/> <100.0 ppm	<input type="checkbox"/> ≥100.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
pyridine	<input type="checkbox"/> None	<input type="checkbox"/> <5.0 ppm	<input type="checkbox"/> ≥5.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
tetrachloroethylene/perchloroethylene	<input type="checkbox"/> None	<input type="checkbox"/> <0.7 ppm	<input type="checkbox"/> ≥0.7 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
trichloroethylene	<input type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
2,4,5-trichlorophenol	<input type="checkbox"/> None	<input type="checkbox"/> <400.0 ppm	<input type="checkbox"/> ≥400.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
2,4,6-trichlorophenol	<input type="checkbox"/> None	<input type="checkbox"/> <2.0 ppm	<input type="checkbox"/> ≥2.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
vinyl chloride	<input type="checkbox"/> None	<input type="checkbox"/> <0.2 ppm	<input type="checkbox"/> ≥0.2 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other

Hazardous Constituents (Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic.)

Additional Comments (Provide comments regarding the chemical or radiological nature of the waste.)
 Alpha maybe up to 200 uci/g

Do not write in this box - EM-8 use only

Waste Classification

<input type="checkbox"/> Non-RCRA waste	<input type="checkbox"/> RCRA-regulated solid waste	<input checked="" type="checkbox"/> RCRA-regulated hazardous waste	<input type="checkbox"/> Radioactive waste
<input type="checkbox"/> PCB	<input type="checkbox"/> municipal refuse	<input type="checkbox"/> hazardous waste	<input type="checkbox"/> low-level waste
<input type="checkbox"/> non-PCB TSCA waste	<input type="checkbox"/> nonhazardous chemical waste	<input type="checkbox"/> mixed low-level waste	<input type="checkbox"/> transuranic waste
<input type="checkbox"/> asbestos	<input type="checkbox"/> administratively controlled waste	<input type="checkbox"/> mixed transuranic waste	
	<input type="checkbox"/> sanitary/industrial sludges		

RCRA Code 1 F001	RCRA Code 2 F002	RCRA Code 3 F005	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
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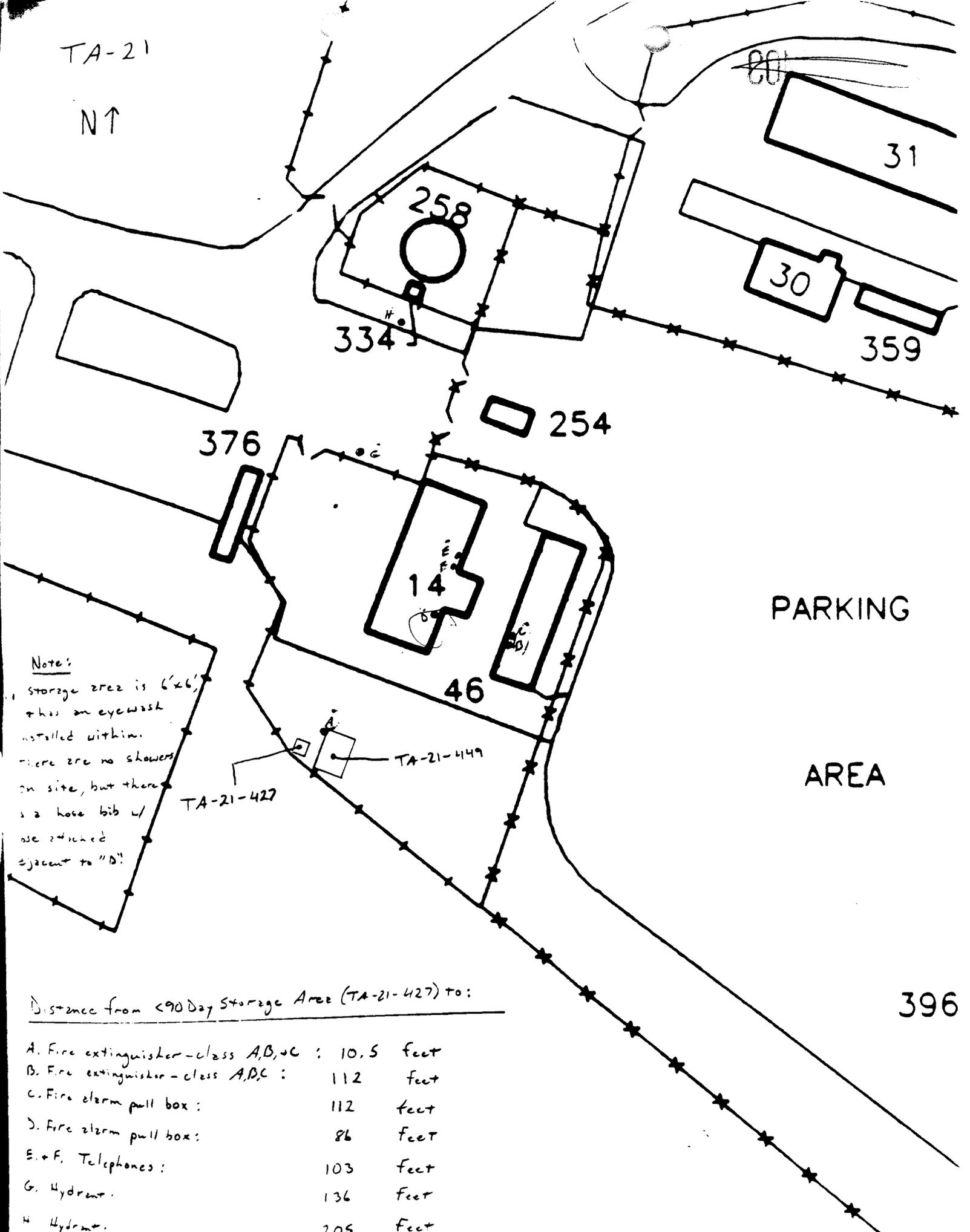
EM-8 Reviewer's Signature <i>Alperion</i>	Date 6/17/93	Cost Center/Program Code for Analysis	Reference Num 06173
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~~CONFIDENTIAL~~

ITEM 4.

TA-21

N ↑



Notes:

Storage area is 6'x6'
 plus an eyewash
 installed within.
 There are no showers
 on site, but there
 is a hose bib w/
 use attached
 adjacent to "B"

TA-21-427
 TA-21-449

Distance from 90 Day Storage Area (TA-21-427) to:

A. Fire extinguisher - class A,B,C :	10.5	Feet
B. Fire extinguisher - class A,B,C :	112	Feet
C. Fire alarm pull box :	112	feet
D. Fire alarm pull box :	86	Feet
E.+F. Telephones :	103	Feet
G. Hydrant :	136	Feet
H. Hydrant :	206	Feet

396

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ITEM 5.

CERTIFICATION OF EVENTS



I certify under penalty of law that no waste was added to the less-than-90 day hazardous waste storage area at TA-21-427 on 8-05-93 during the time that the building was not grounded, and that the containers remained closed during this time.

Signature: *George R. Lujan* Date: 12-15-94

George R. Lujan, Painter Formeman and custodian of storage area at TA-21-427

I certify under penalty of law that the transportable building that serves as a less-than-90 day hazardous waste storage area, TA-21-427, was relocated on 8-05-93. The building was moved approximately 75 feet to a more secure location, and the entire move, including severing the ground wire and reconnecting it, was initiated and completed in the same day.

Signature: *Michael A. Ebert* Date: 12-15-94

Michael A. Ebert, Construction Superintendent at TA-21

[Handwritten signature]

ITEM 6.

SITE-SPECIFIC EMERGENCY RESPONSE PLAN

(Required per OSHA 29CFR1910.120 and accompanies
LANL Hazardous Waste Facility Contingency Plan)

<90 Day Hazardous Waste Storage Area @ TA-21-427

- A. Pre-emergency planning and coordination with outside parties:**
- Refer to LANL Hazardous Waste Facility Contingency Plan and SPI 12-04-005.
- B. Personnel roles, lines of authority, and communication:**
- Refer to LANL Hazardous Waste Facility Contingency Plan and SPI 12-04-005.
- C. Emergency recognition and prevention:**
- Refer to LANL Hazardous Waste Facility Contingency Plan and SPI 12-04-005.
- D. Safe distances and places of refuge:**
- Proceed to muster area along fence north of building 14.
- E. Site security and control:**
- Responsibility of the Incident Commander or his designee.
- F. Evacuation routes and procedures:**
- Evacuation procedures are discussed in the LANL Hazardous Waste Facility Contingency Plan. Evacuation route is to leave this facility through the only door, and proceed to the CCSA/DP-site muster area.
- G. Decontamination procedures:**
- Site - Refer to the LANL Hazardous Waste Facility Contingency Plan.
- Personnel - For exposure to the eyes, use eywash station on west wall. For dermal exposure, wash affected areas using restroom located in building 14.

ITEM 7.

Los Alamos
NATIONAL LABORATORY
memorandum

EXPLOSIVES TECHNOLOGY & SAFETY
DX-16

To/MS: Barbara Stine, DX-DO, P915

From/MS: J. R. Stine/K. A. Firestone, DX-16, C920

Phone/FAX: (505)665-7087/(505)667-0500

Symbol: DX-16:94-282

Date: 09/12/94

**RESPONSE TO EPA/MULTI-MEDIA AUDIT FINDINGS FROM AUGUST 1993
ADDRESSED IN COMPLIANCE ORDER NM0890010515**

Finding #29 - TA-9-21-135 Satellite Accumulation Point

The item in question was a precipitate in a beaker that was work in progress. The beaker was labelled with the contents. The laboratory employee had inadvertently placed the beaker in the same hood that contained satellite storage. The beaker was covered and moved immediately to a proper storage area.

Finding #44 - TA-9-21-AE191 Satellite Accumulation Point

This is an incorrect building designation. The correct designation should be TA-9-32-AE191. This structure is a sump and not now or ever was a satellite accumulation point as indicated in the finding. Attached is a list the satellite storage areas for the time in question.

Finding #55 TA-14 Burn Cage

We have shut this operation down as of 09/12/94. The consequence of shutting this operation down is the potential for being out of compliance with our satellite storage areas. We were the only facility at LANL that could dispose of uncharacterized high explosive waste and all high explosive contaminated waste coming from the laboratory operations at TA-9 were processed here. Attached please find memorandum DX-11:94-331 and a memorandum from Tony Grieggs, EM-8, concerning this issue.

Distribution:

K. Uher, DX-16

G. Rodriquez, ESH-8, K498

ES&H File

DX-16 File

ITEM 8.

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

memorandum

TO: Barbara Skaggs, CLS-DO, MS J563
Jerry Umphres, CLS-DO, MS-E525

DATE: August 4, 1993

FROM: George York *George York*

MAL STOP/TELEPHONE: E543/7-2553

SYMBOL: CLS-5-93-256

SUBJECT: SATELLITE WASTE STORAGE VOLUME AT TSL-85

During the EPA inspection on 4 August 1993, it was estimated (by the inspectors) that we had exceeded the 55 gal limit. The estimate was based on guesses as to the contents of various containers. Subsequent to the inspection, I measured the actual volumes with the following results:

Used Freon -	stored in carboy	-	14" diam x 9.5" liquid level	= 6.3gal
Mop water -	stored in 30gal drum	-	18.25" diam x 8" liquid level	= 9.1gal
Rags	-	stored in 30gal drum	-	18.25" diam x 16" level = 18.2gal
Lead	-	stored in 30gal drum	-	104.4kg @ 43.2 kg/gal = 2.4gal
Misc	-	Plastic drum	-	estimate = 0.5gal
Total =				36.5 gal

Since the lead was primarily in the form of lead sheet, it took up much more space than the actual volume of the lead as determined by weighing. If necessary, the lead sheet could have been more compactly stored, however, we were under the impression that what mattered was the volume of the material, not the air around the material. We believe that we were safely below the limit and in compliance. Upon inspection of the lead, it appears that it consumed only about 2/3 of the drum, so that even if one takes the total volume occupied by the lead and the air of about 20 gal, the total in the storage area is about 54 gal.

cy:

Bigio, I., CLS-5, MS E543

Gallegos, G., CLS-5, MS E543

Lester, Charles, CLS-5, MS E543

Sorem, Mike, CLS-5, MS E543

CLS-5 File

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ITEM 9.

TO: Tony Grleggs FAX: 7-5224
FROM: Sara B. Helmick CST Chemistry Facilities Manager
Phone : 7-9583
FAX: 7-2964

Following are my comments on the four findings at TA35.

Item 32: TA35-85-106B: greater than 55 gallons of hazardous waste was being stored.

See the attached letter from George York regarding the contents of the containers.. Actual measurement of the volumes stored shows 36.5 gallons. It is apparent that the auditors just added up the volume of the containers without bothering to look inside. I do not believe that we are guilty here.

Item 39: TA35-85-106B: waste was not being accumulated under the control of the operator. This SSA was in a locked building, properly labeled, and had a sticker showing the name of the owner Jerry Gallegos. Jerry was present in the building. Jerry had a formal log showing the name of every person who had put material in the SSA and what the material was.

Item 40: TA35-125-F108: waste was not being accumulated under the control of the operator. This SSA was in a locked building inside a locked room. The only way into the room is by pushing a button which alerts the staff inside that you want entry. They let you in. The owner of this SSA is Rodney Schmill. He is always present in the room. I understand that a door between this locked laboratory and an office was open during the audit. However, the outside door to the office was locked. The office has subsequently been sealed off from the lab. The SSA was properly labeled.

Item 41: TA35-255-101: waste was not being accumulated under the control of the operator. This SSA is in a locked building. The owner of the SSA is Judy Godard. Only people working in the building and group management can unlock the door. The SSA is properly labeled.

It appears to me that all of these SSAs were properly controlled. They were in areas that had limited access, the generator was working in adjacent areas to the SSA, and the SSAs were all properly labeled. If this is not "under the control" I would like to see a written definition of what that term means. I know you are working this issue and I really appreciate your help. Call if you need more information from CST.

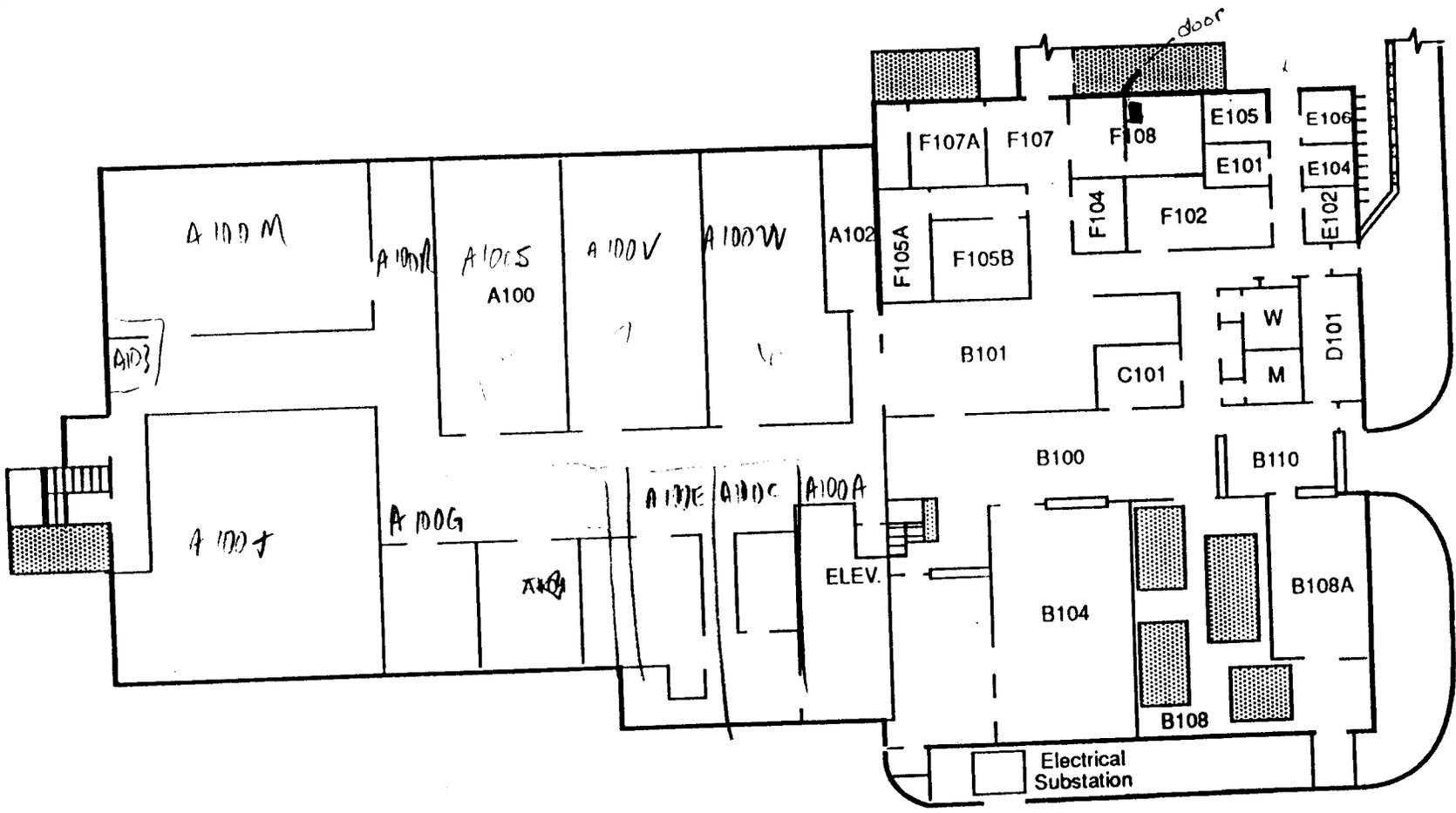
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ITEM 10.

~~CONFIDENTIAL~~

SSA

TA-35 TSL-125



~~CONFIDENTIAL~~

ITEM 11.

~~CONFIDENTIAL~~

Los Alamos
NATIONAL LABORATORY
memorandum

EXPLOSIVES TECHNOLOGY
DX-16

To/MS: Michelle Cash, ESH-19, K490

Thru: Jim Stine, DX-16, C920 JRS

From/MS: Gordon Jio, DX-16, MS-C920 GI

Phone/FAX: (505)667-4325, (505)667-0500

Symbol: DX-16:94-391

Date: December 13, 1994

TA-9-191 screen pit located at NW corner of Building 32

This screen pit services Building 32 in the TA-9 area. Processes in Building 32 are: Mass Spectroscopy generating little if any waste going through the screen pit, and small scale pressing of high explosives in a hand press. Clean-up for the small scale pressing operation uses kimwipes and acetone.

Distribution:

James R. Stine, DX-16
Gordon Jio, DX-16
Deanne Idar, DX-16
DX-16 files

Group DX-16 Explosives Technology and Safety Analytical Laboratory Report

~~CONFIDENTIAL~~

Requester G.Jio.DX-16, C920

Analytical Lab # 22180

Program Code CW-11

Sample ID Supernate Fluid (Sump water TA-9-191 screen pit)

Tests Required pH, COD, H.E. By HPLC

Date Received 10/7/94

Operator JGA, WK

Date Reported 12/1/94

Total Weight 2-ea

Manufacture DX-16

Composition

Analysis

Nominal

N/A

N/A

N/A

Impact Sensitivity

Type 12 N/A H50 cm N/A HMX, Ref, cm

Thermal Tests

Thermal Stability N/A ml/g Temp. N/A °C Time _____

DTA N/A °C

Pyrolysis N/A °C

Color _____

Misc. Tests

Sample	pH	COD (100mg/L)
Supernate Fluid Sump screen pit	8.18	3
TA-9-191 Sediment screen pit	7.04	<1
TA-9-191		

SEE ATACHED SHEET FOR H.E. ANALYSIS.

DX-16 ANALYTICAL LABORATORY REPORT

SAMPLE: SUMP WATER TA-9 BLDG, 32 (TA-9-191 SUMP SCREEN PIT)

ANALYSIS: LIQUID CHROMATOGRAPHY

ANALYST: W KING

CAS Number	COMPOUND	AMT. DETECTED (Ug/l)
2691-41-0	HMX	29.08
121-82-4	RDX	0.81
99-35-4	1,3,5-TNB	<0.04
99-65-0	1,3-DNB	<0.03
479-45-8	TETRYL	<0.24
98-95-3	NITROBENZENE	--
5118-96-7	2,4,6-TNT	0.65
1946-51-0	4-A-2,6-DNT	<0.06 *
355-72-78-2	2-A-4,6-DNT	*
606-20-2	2,6-DNT	<0.31 *
121-14-2	2,4-DNT	*
88-72-2	2-NT	<0.10
99-99-0	4-NT	<0.12
99-08-1	3-NT	<0.13

(*) INDICATES AN ISOMERIC MIXTURE (not distinguishable by this method).

(<) Indicates that amount detected is less than the detection limit for that compound.

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490.

Division/Group DX-16	Telephone 667-4325	Mail Stop C-920	Technical Area 9	Building 191	Room
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Method of Characterization Knowledge of Process (KOP) - OR - Chemical/Physical Analysis (specify below)
 MSDS attached (optional) Request for analysis Analysis attached

Waste Categories (Choose one or more of the categories below that most accurately describes your waste.)

<input type="checkbox"/> Flammable	<input type="checkbox"/> Pesticide	<input type="checkbox"/> Photographic	<input type="checkbox"/> Spent coolant	<input type="checkbox"/> Plastics
<input type="checkbox"/> Combustible	<input type="checkbox"/> Beryllium	<input type="checkbox"/> Sanitary	<input type="checkbox"/> Aerosol cans	<input type="checkbox"/> Filter media
<input checked="" type="checkbox"/> High explosive	<input type="checkbox"/> Asbestos	<input type="checkbox"/> Radiochemistry	<input type="checkbox"/> Motor oil	<input type="checkbox"/> Vacuum filter media
<input type="checkbox"/> DOT oxidizer	<input type="checkbox"/> Solvent	<input type="checkbox"/> Paint waste	<input type="checkbox"/> Pump oil	<input type="checkbox"/> Cement paste
<input type="checkbox"/> Pyrophoric	<input type="checkbox"/> Waste rags	<input type="checkbox"/> Laboratory trash	<input type="checkbox"/> Capacitor oil	<input type="checkbox"/> Non-salvageable
<input type="checkbox"/> Cyanide	<input type="checkbox"/> Glass	<input type="checkbox"/> Metallurgical	<input type="checkbox"/> UST remediation	<input type="checkbox"/> Nonrecyclable
<input type="checkbox"/> Heavy metal	<input type="checkbox"/> Plating solution	<input type="checkbox"/> Scrap metal	<input type="checkbox"/> Contaminated soils	<input type="checkbox"/> Building debris
<input type="checkbox"/> Corrosive	<input type="checkbox"/> Etchant	<input type="checkbox"/> Medical/Biological	<input type="checkbox"/> Environmental/SWMU	<input type="checkbox"/> Firing site debris

General Description (Provide a general description of the waste and/or waste-generating process below.)

Water and sludge from a screen pit. Sludge contains parts per billion of high explosives

Waste Description (Check only one box in each column.)

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
<input type="checkbox"/> Solid	<input type="checkbox"/> < 100°	<input type="checkbox"/> ≤ 2.0	<input type="checkbox"/> Unstable	<input type="checkbox"/> < 50 ppm
<input checked="" type="checkbox"/> Semisolid/sludge	<input type="checkbox"/> 100° to 139°	<input type="checkbox"/> 2.1 to 12.4	<input type="checkbox"/> Water reactive	<input type="checkbox"/> 50 to 500 ppm
<input type="checkbox"/> Absorbed liquid	<input type="checkbox"/> 140° to 200°	<input type="checkbox"/> ≥ 12.5	<input type="checkbox"/> Cyanides	<input type="checkbox"/> > 500 ppm
<input type="checkbox"/> Liquid	<input type="checkbox"/> > 200°	<input checked="" type="checkbox"/> Not aqueous	<input type="checkbox"/> Sulfides	<input checked="" type="checkbox"/> None
<input type="checkbox"/> Gas cylinder or vessel	<input checked="" type="checkbox"/> Not ignitable		<input type="checkbox"/> Shock sensitive	
<input type="checkbox"/> Multilayered			<input type="checkbox"/> Class A or B explosive	
<input type="checkbox"/> Suspended solids			<input checked="" type="checkbox"/> Nonreactive	
<input type="checkbox"/> Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? Yes No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) Yes No

C. If the answer to question A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity Nonradioactive

Suspect Radioactive

Activity Measure Radiation Type

≤ 2.0 nCi/g alpha gamma

> 2.0 nCi/g t^{1/2} < 20 yr tritium

> 10.0 nCi/g t^{1/2} ≥ 20 yr

> 100.0 nCi/g beta

WASTE GENERATOR CERTIFICATION: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Waste Generator's Name (last, first, middle) Jio, Gordon	Z Number 093700	Signature <i>Gordon Jio</i>	Date 12/8/94
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If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). -->	Name (last, first, middle) Jio, Gordon	Mail Stop C-920
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Toxic Metals (Indicate if any of the following toxic metals are present in your waste at the posted concentrations.)

arsenic	<input type="checkbox"/> None	<input type="checkbox"/> <5.0 ppm	<input type="checkbox"/> ≥5.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
barium	<input type="checkbox"/> None	<input type="checkbox"/> <100.0 ppm	<input type="checkbox"/> ≥100.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
cadmium	<input type="checkbox"/> None	<input type="checkbox"/> <1.0 ppm	<input type="checkbox"/> ≥1.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
chromium	<input type="checkbox"/> None	<input type="checkbox"/> <5.0 ppm	<input type="checkbox"/> ≥5.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
lead	<input type="checkbox"/> None	<input type="checkbox"/> <5.0 ppm	<input type="checkbox"/> ≥5.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
mercury	<input type="checkbox"/> None	<input type="checkbox"/> <0.2 ppm	<input type="checkbox"/> ≥0.2 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
nickel	<input type="checkbox"/> None	<input type="checkbox"/> <134.0 ppm	<input type="checkbox"/> ≥134.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
selenium	<input type="checkbox"/> None	<input type="checkbox"/> <1.0 ppm	<input type="checkbox"/> ≥1.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
silver	<input type="checkbox"/> None	<input type="checkbox"/> <5.0 ppm	<input type="checkbox"/> ≥5.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
thallium	<input type="checkbox"/> None	<input type="checkbox"/> <130.0 ppm	<input type="checkbox"/> ≥130.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other

Organic Compounds (Indicate if any of the following organic compounds are present in your waste at the posted concentrations.)

benzene	<input type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
carbon tetrachloride	<input type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
chlorobenzene	<input type="checkbox"/> None	<input type="checkbox"/> <100.0 ppm	<input type="checkbox"/> ≥100.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
chloroform	<input type="checkbox"/> None	<input type="checkbox"/> <8.0 ppm	<input type="checkbox"/> ≥8.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
cresol	<input type="checkbox"/> None	<input type="checkbox"/> <200.0 ppm	<input type="checkbox"/> ≥200.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
1,4-dichlorobenzene	<input type="checkbox"/> None	<input type="checkbox"/> <7.5 ppm	<input type="checkbox"/> ≥7.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
1,2-dichloroethane	<input type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
1,1-dichloroethylene	<input type="checkbox"/> None	<input type="checkbox"/> <0.7 ppm	<input type="checkbox"/> ≥0.7 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
2,4-dinitrotoluene	<input type="checkbox"/> None	<input type="checkbox"/> <0.13 ppm	<input type="checkbox"/> ≥0.13 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
hexachlorobenzene	<input type="checkbox"/> None	<input type="checkbox"/> <0.13 ppm	<input type="checkbox"/> ≥0.13 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
hexachlorobutadiene	<input type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
hexachloroethane	<input type="checkbox"/> None	<input type="checkbox"/> <3.0 ppm	<input type="checkbox"/> ≥3.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
methyl ethyl ketone	<input type="checkbox"/> None	<input type="checkbox"/> <200.0 ppm	<input type="checkbox"/> ≥200.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
nitrobenzene	<input type="checkbox"/> None	<input type="checkbox"/> <2.0 ppm	<input type="checkbox"/> ≥2.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
pentachlorophenol	<input type="checkbox"/> None	<input type="checkbox"/> <100.0 ppm	<input type="checkbox"/> ≥100.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
pyridine	<input type="checkbox"/> None	<input type="checkbox"/> <5.0 ppm	<input type="checkbox"/> ≥5.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
tetrachloroethylene/perchloroethylene	<input type="checkbox"/> None	<input type="checkbox"/> <0.7 ppm	<input type="checkbox"/> ≥0.7 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
trichloroethylene	<input type="checkbox"/> None	<input type="checkbox"/> <0.5 ppm	<input type="checkbox"/> ≥0.5 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
2,4,5-trichlorophenol	<input type="checkbox"/> None	<input type="checkbox"/> <400.0 ppm	<input type="checkbox"/> ≥400.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
2,4,6-trichlorophenol	<input type="checkbox"/> None	<input type="checkbox"/> <2.0 ppm	<input type="checkbox"/> ≥2.0 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other
vinyl chloride	<input type="checkbox"/> None	<input type="checkbox"/> <0.2 ppm	<input type="checkbox"/> ≥0.2 ppm	<input type="checkbox"/> TCLP	<input type="checkbox"/> Other

Hazardous Constituents (Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic.)

Additional Comments (Provide comments regarding the chemical or radiological nature of the waste.)

To the TA-116 Burn Ground for treatment JMC 12/12/94

Do not write in this box - EM-8 use only

<input type="checkbox"/> Non-RCRA waste		<input checked="" type="checkbox"/> RCRA-regulated solid waste		<input type="checkbox"/> RCRA-regulated hazardous waste		<input type="checkbox"/> Radioactive waste	
<input type="checkbox"/> PCB <input type="checkbox"/> non-PCB TSCA waste <input type="checkbox"/> asbestos		<input type="checkbox"/> municipal refuse <input checked="" type="checkbox"/> nonhazardous chemical waste <input type="checkbox"/> administratively controlled waste <input type="checkbox"/> sanitary/industrial sludges		<input type="checkbox"/> hazardous waste <input type="checkbox"/> mixed low-level waste <input type="checkbox"/> mixed transuranic waste		<input type="checkbox"/> low-level waste <input type="checkbox"/> transuranic waste	
RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
EM-8 Reviewer's Signature			Date	Cost Center/Program Code for Analysis		Reference Number	
<i>Michelle Case</i>			<i>12/12/94</i>			<i>10182</i>	

ITEM 12.

[Handwritten Signature]

EXPLANATION OF PROCESS CODE LISTINGS AND/OR DESIGN CAPACITY

Line 1	S01	TA-54, Area L TA-50, Container Storage Units
Line 2	S02	TA-54, Area L Waste Oil Storage Tanks
Line 3	S04	TA-54, Area L Surface Impoundments B and D TA-35, TSL-85 and TSL-125 Surface Impoundments
Line 4	T01	TA-54, Area L TA-50, Batch Waste Treatment Unit
Line 5	T02	TA-16, Surface Impoundment
Line 6	T03	TA-16, Incinerator TA-50, Incinerator
Line 7	T04	The following open burning units are located at TA-16:

- Two burn pads (388, 399) for burning HE-contaminated solids. Each unit has a capacity of 1,000 pounds of solids per burn.
- Two pressure vessels (401, 406) for burning HE-contaminated sludges. Each unit has a capacity of 750 pounds of sludge per burn.
- One burn pad for HE-contaminated oil/solvent mixtures. This unit has a capacity of 100 gallons per burn.
- One flash pad for HE-contaminated equipment. This unit does not have a design capacity.
- One burn cage for HE-contaminated paper. This unit has a capacity of 3.0 cubic feet per burn.



The following waste detonation units are designed to open detonate explosives:

<u>Unit</u>	<u>Design Capacity</u> (pounds of HE per detonation)
TA-14-35	10
TA-15, Phermex	100
TA-36, Kappa 8	200

TA-40, SDS

Inactive unit to be closed
under interim status

TA-39-6

100

TA-39-57

250

Line 8

T04

Waste sludges from TA-54, Area L treatment tanks and the TA-50 Batch Waste Treatment unit are mixed with portland cement and/or Envirostone and placed in 55-gallon drums. The cement serves to bind any fluid remaining in the sludge. This process is performed at TA-54, Area L.

Line 9

D80

TA-54, Area L
TA-54, Area G
TA-54, Area H
TA-16, Area P

HSWS WQT

(AUTO)

THE FOLLOWING FILE(S) ERASED

FILE	FILE TYPE	OPTION	TEL NO.	PAGE	RESULT
014	MEMORY TX	PERSONAL CODE ****	88274361	09/09	OK

ERRORS

- 1) HANG UP OR LINE FAIL
- 2) BUSY
- 3) NO ANSWER
- 4) NO FACSIMILE CONNECTION

**LOS ALAMOS NATIONAL LABORATORY
HAZARDOUS & SOLID WASTE GROUP (ESH-19)
FAX TRANSMITTAL SHEET**

FAX #: (505) 667-5224

VERIFICATION #: (505) 667-0666

DATE: 12/01/94 ID # _____ LOG NO: ESH-19:94-FAX-

FROM: Ellena Salazar PHONE #: (____) 7-0666
For: Jack Ellvinger

TO: Barbara Hoditschek VERIFY FAX #: (____) 827-4361 PHONE # (____) 827-4308

GRP/ORG: _____

TO: _____ VERIFY FAX #: (____) _____ PHONE # (____) _____

GRP/ORG: _____

MEMO

TO: Barbara Hoditschek, NMED
Stu Dinwiddee, NMED
Steve Zappee, NMED
Coby Muckelroy, NMED
FROM: Jack Ellvinger, ESH-19
DATE: December 1, 1994
RE: On-site/Off-site Permit Modification

=====

As per our per our conversations of 11/22/94 (meeting at NMED) and with Steve Zappee on 11/30/94 I am providing:

- 1) New proposed language for the on-site/off-site issue
- 2) Providing information to bring our list of LANL units into sync
- 3) Updating some location information for Stu on the burn cage
- 4) Asking what to do now that the 30 day extension for the Sigma Mesa <90 day storage unit is about to expire

On-site/Off-site:

MODULE II

GENERAL FACILITY CONDITIONS

1. Off-Site Wastes. This permit does not allow ... prior to accepting such waste.
2. Off -site wastes generated at environmental remediation sites for the Los Alamos National Laboratory and listed in Table II-3 of this permit may be brought on-site to a treatment, storage or disposal unit.

List of LANL Units:

Steve was correct. The location numbers for TA-16 are: 387, 388, and 399.

Burn Cage:

This unit was not properly located in the 1988 permit application. It is located at TA-14, Q Site, Firing Point Located at Mound #3.

30 Day Extension:

The issue of the on-site/off-site has put LANL in the position of having Environmental Restoration Waste generated off-site to be stored at <90 day storage areas. The <90 storage area at Sigma exceeded its 90 day limitation and an extension was sought from and granted by NMED. That 30 day extension expires on 12/4/94. It does not appear that the issue of modifying the permit for receipt of Environmental Restoration generated waste from off-site locations will be completed for at least a couple weeks. We are concerned. We do not want to be out of compliance. Do you want us to apply for an additional extension? Please let me know as soon as possible so a formal request can be sent to you if

2004

this is the appropriate step to take. If there is another path that is preferable please let me know.