



Interoffice Communication

To B. I. Raffle
From C. A. Guerra
Date July 15, 1982
Subject LAKE CHARLES VCM INCINERATOR STATUS

file LC VCM

Mike Hayes requested the Legal Department to review federal and state hazardous waste management acts and regulations to determine if the Lake Charles VCM incinerators are exempt from RCRA regulation under their present incineration operations. This memorandum is in response to his request.

I. CONCLUSION

A. Federal

The incineration of gaseous emissions from various industrial processes are exempt from RCRA regulations. However, the incineration of light ends which may contain solids, liquids or semi-solids is exempted from regulation only if the incineration process can qualify for:

- (1) the recovery of heat or energy exemption of §261.2, or
- (2) the re-use/recycle/reclaim exemption of §261.6, or
- (3) the ignitable waste exemptions of §§264.340 and 265.340.

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process, their incineration would probably be regulated by the LHWMP.

II. BACKGROUND

The Lake Charles VCM incinerators were put in to comply with the National Emission Standards for Hazardous Air Pollutants (NESHAPS), 40 C.F.R. Part 61, as authorized by Sections 112 and 301(a) of the Clean Air Act. NESHAPS requires that the concentration of vinyl chloride in all exhaust gases discharged to the atmosphere from any equipment used in ethylene dichloride purification not exceed 10 ppm. This is accomplished at Lake Charles by using incinerators which are in continuous operation. Presently the primary fuel for the Lake Charles incinerators is natural gas which could be supplemented, from time to time, by light ends from the VCM manufacturing process.

III. RCRA DEFINITIONS

Section 260.10 of the regulations define the following:

"Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

"Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid

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waste or hazardous waste into or on any land or water ...

"Facility" means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste ...

"Hazardous waste" means a hazardous waste as defined in §261.3 ...

"Incinerator" means an enclosed device using controlled flame combustion, the primary purpose of which is to thermally breakdown hazardous waste ...

"Solid waste" means a solid waste as defined in §261.2 ...

"Thermal treatment" means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of hazardous waste. Examples of thermal treatment processes are incineration ...

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"Treatment" means any method, technique or process ... designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous

Section 261.2 of the regulations defines solid waste as:

(a) [A]ny garbage, refuse, sludge or any other waste material which is not excluded under §261.4(a).

(b) An "other waste material" is any solid, liquid, semi-solid or contained gaseous material, resulting from industrial, commercial ... operations ... which:

(1) Is discarded or is being accumulated, stored or physically, chemically or biologically treated prior to being discarded; or

(2) Has served its original intended use and sometimes is discarded ...

(c) A material is "discarded" if it is abandoned (and not used, re-used, reclaimed or recycled) by being:

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- (1) Disposed of; or
- (2) Burned or incinerated, except where the material is being burned as a fuel for the purpose of recovering usable energy [emphasis added]

Section 261.3 of the regulations defines hazardous waste as:

- (a) A solid waste, as defined in §261.2, is hazardous waste if:
 - (1) It is not excluded from regulation as a hazardous waste under §261.4(b); and
 - (2) It meets any of the following criteria:
 - (i) It exhibits any of the characteristics of hazardous waste identified in Subpart C.
 - (ii) It is listed in Subpart D

Section 261.4, "Exclusions", lists certain materials which are not considered solid wastes. Although not pertinent to the analysis in this memorandum, it reads in part as follows:

- (a) ... The following materials are not solid wastes for the purpose of this Part ...
 - (1)(i) Domestic sewage ...
- (b) ... The following solid wastes are not hazardous wastes ...
 - (1) Household wastes

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Section 261.6 addresses the special requirements for hazardous waste which is used, re-used, recycled or reclaimed. It reads in part as follows:

(a) A hazardous waste which meets any of the following criteria is not subject to regulation under Parts 262 through 265 or Parts 122 through 124 of this Chapter ... until such time as the Administrator promulgates regulations to the contrary:

(1) It is being beneficially used or reused or legitimately recycled or reclaimed.

(2) It is being accumulated, stored or physically, chemically or biologically treated prior to beneficial use or re-use or legitimate recycling or reclamation

IV. FEDERAL REGULATION

A. Authority

EPA considers incineration a form of treatment and not a method of disposal. (See Preamble to January 23, 1981 regulations, 46 F.R. 7672.) Therefore, EPA concludes that its authority to regulate the incineration of hazardous wastes stems from Section 1004(34) of the Resource Conservation and Recovery Act (RCRA). It defines treatment as:

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"[A]ny method, technique, or process ... designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste non-hazardous...."

Since incineration can be viewed as a process which typically renders wastes non-hazardous or reduces wastes in volume, the incineration of wastes appears to be covered by the treatment definition. The RCRA incineration provisions, Subpart O of 40 C.F.R. Part 265 (interim status standards) and Part 264 (final standards) establish the minimum national standards for owners and operators of facilities that incinerate hazardous wastes.

B. Subpart O History

On January 23, 1981 (46 F.R. 7666), EPA promulgated regulations which established the standards for incinerators. These standards imposed identical requirements on new and existing incinerators. EPA received numerous comments contending that for various financial, technical, and practical reasons, the standards were inappropriate for application to existing incinerators.

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Therefore, on October 20, 1981 (46 F.R. 51407), EPA proposed to suspend the effective date of the standards as applied to existing incinerators, pending a re-examination of the standards in light of the comments received. However, on June 24, 1982 (47 F.R. 27516) EPA concluded that there was no basis for suspending the standards for existing incinerators. Thus, the current incineration standards for new and existing incinerators remain the same.

V. INTERIM STATUS STANDARDS (PART 265)

A. Scope

The intent of the interim status standards is to establish minimum standards for the management of hazardous wastes prior to the implementation of the final standards. Section 265.1 specifically addresses the scope and applicability of Part 265. It reads in part as follows:

(b) ... These standards apply to all treatment, storage or disposal of hazardous waste ... except as specifically provided otherwise in this part or Part 261 of this Chapter.

(c) The requirements of this part do not apply to ...

(6) The owner or operator of a facility which treats or stores hazardous waste, which

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treatment or storage meets the criteria in
§261.6(a)

B. Part 265 Incinerator Standards

Section 265.340 reads in part as follows:

(a) The regulations in this Subpart apply to owners or operators of facilities that treat [ignitable or corrosive] hazardous waste in incinerators, except as §265.1 and paragraph (b) of this Section provide otherwise.

(b) Owners and operators of incinerators burning [ignitable or corrosive] hazardous waste are exempt from all of the requirements of this Subpart, except §265.351 (Closure), provided that the owner or operator has documented, in writing, that the waste would not reasonably be expected to contain any of the hazardous constituents listed in Part 261, Appendix VIII ... if the waste to be burned is:

- (1) Listed as a hazardous waste in Part 261, Subpart D ... solely because it is ignitable ... corrosive ... or both ... or
- (3) A hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by tests for

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characteristics of hazardous wastes under Part
261

Section 261.21 defines the characteristics of ignitability.

It states in part:

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(1) It is a liquid ... containing less than 24 percent alcohol by volume, and has a flash point less than 60° C (140°F.) ...

(2) It is not liquid and is capable, under standard temperature and pressure, of causing fire ... and, when ignited, burns so vigorously and persistently that it creates a hazard.

(3) It is an ignitable compressed gas as defined in 49 C.F.R. 173.300 and as determined by the test methods described in that regulation

Section 173.300 defines the term compressed gas as:

[A]ny material or mixture having in the container absolute pressure exceeding 40 p.s.i. at 70°F. or, regardless of the pressure at 70°F., having an

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absolute pressure exceeding 104 p.s.i. at
130°F.

C. Activities Exempted under Part 265

In at least three instances, the interim standards of Part 265 exempt certain types of wastes from the incineration regulations. Situation 1 occurs if the waste does not meet the definition of solid waste found in §261.2. Situation 2 occurs if the waste meets the use, re-use, recycle, reclaim criteria of §261.6. Situation 3 occurs if the waste is hazardous solely because it is ignitable and it does not contain any of the toxic constituents listed in Part 261, Appendix VIII (attached for reference).

1. Exemption Under the Definition of Solid Waste

Section 261.2 defines solid wastes as any garbage, refuse sludge or other waste material which is not excluded under §261.4(a). Other waste material is defined as any solid, liquid, semi-solid or contained gaseous material which is discarded or intended to be discarded.

Using the definitions of solid waste (§261.2) and container (§260.10) one can argue that an incineration process which only involves "non-contained gaseous material" does not meet

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the §260.10 definition of treatment. This exclusion of "non-contained gaseous material" from the definition of solid waste could be interpreted as an exemption by omission.

At §261.2(c), the solid waste definition goes on to state that any solid, liquid, or semi-solid waste material which is being incinerated is being discarded unless the material is being burned as a fuel for the purposes of recovering usable energy. This recovery of heat or energy exemption could be relevant since VCM light ends have a high BTU value. Light ends, therefore, could be used as a legitimate replacement for natural gas to keep the Lake Charles VCM incinerators in constant operation. Thus, an argument can be made that by burning VCM light ends as a fuel the Lake Charles incinerators are recovering useful energy by backing natural gas out of the process.

If the heat or energy exemption is relied upon, however, one must be able to demonstrate that a significant energy savings is achieved by using light ends as a fuel. It is doubtful that this can be shown unless a significant amount of natural gas is backed out of the incineration process when the light ends are used. If the amount of natural gas used in the incineration of light ends remains the same or is not significantly reduced, the incineration process will be regulated.

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2. Re-Use/Recycle/Reclaim Exemption

The re-use/recycle/reclaim exemption of §261.6 is relevant because the VCM light ends are currently incinerated at Lake Charles only when the plant wants to produce industrial grade HCL. The HCL is, in effect, the desired end-product of the VCM incineration process.

The availability of the re-use/recycle/reclaim exemption in this instance will turn on whether the recovery of HCL is the primary or the ancillary purpose of the incineration process. The May 19, 1980 Preamble to the regulations (45 F.R. 33093) states that use of the re-use/recycle/reclaim exemption is confined to:

[B]ona fide "legitimate" and "beneficial" uses and recycling of hazardous wastes. Sham uses and recovery or reclamation activities -- e.g. ... burning organic wastes that have little or no heat value ... under the guise of energy recovery -- are not within its [deferred] scope ... In enforcing this provision, EPA will be particularly suspicious of use ... or operations which were not conducted prior to the publication of these regulations.

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In this instance, the incineration of light ends at Lake Charles should be able to qualify as a legitimate re-use/recycle/reclaim operation and, thus, be exempt from the Part 265, Subpart O regulations.

3. Ignitable Waste Exemption

Section 265.340(b) exempts certain ignitable hazardous wastes from the majority of the requirements of Subpart O. To qualify for this exemption the ignitable or corrosive hazardous wastes must not contain any of the toxic constituents listed in Part 261, Appendix VIII of the regulations.

The January 23, 1981 Preamble to the Incinerator Standards (46 F.R. 7673) states that all toxic organic constituents must be destroyed in an incinerator in accordance with the performance standards. Therefore, any ignitable hazardous waste containing such constituents is subject to all of the Subpart O standards. Hence, if an analysis of the hazardous waste shows the presence of any listed toxic hazardous constituents, that hazardous waste must be incinerated in accordance with the 99.99% Destruction and Removal Efficiency (DRE) performance standards of the incineration regulations.

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VI. FINAL STANDARDS

A. Scope

Although not applicable at this time, the final standards will eventually impact the Lake Charles VCM incineration operations. The intent of the final standards is to establish minimum national standards which define the acceptable management of hazardous wastes. Section 264.1 specifically addresses the scope and applicability of Part 264. It reads in part as follows:

... (b) The standards in this part apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this part of Part 261 ...

(g) The requirements of this part do not apply to ...

(2) The owner or operator of a facility which treats or stores hazardous waste, which treatment or storage meets the criteria in §261.6(a)

B. Part 264 Incinerator Standards

Section 264.340 reads in part as follows:

(a) The regulations in this Subpart apply to owners and operators of facilities that incinerate

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hazardous waste, except as §264.1 provides otherwise.

(b) After consideration of the waste analysis included with Part B of the permit application, the Regional Administrator, in establishing the permit conditions, must exempt the applicant from all requirements of this Subpart except §264.341.

(Waste Analysis) and §264.351 (Closure),

(1) If the Regional Administrator finds that the waste to be burned is:

(i) Listed as a hazardous in Part 261, Subpart D, of this Chapter solely because it is ignitable (Hazard Code I), corrosive (Hazard Code C), or both; or ...

(iii) A hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the test for characteristics of hazardous wastes under Part 261, Subpart C ... or ...

(2) If the waste analysis shows that the waste contains none of the hazardous constituents listed in Part 261, Appendix VIII ... which would reasonably be expected to be in the waste.

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(c) If the waste to be burned is one which is described by ... this Section and contains insignificant concentrations of the hazardous constituents listed in Part 261, Appendix VIII ... then the Regional Administrator may, in establishing permit conditions, exempt the applicant from all requirements of this Subpart, except §264.341 (Waste analysis) and §264.351 (Closure) ... unless the Regional Administrator finds that the waste will pose a threat to human health and the environment when burned in an incinerator. [Emphasis added.]

C. Activities Exempted under Part 264

The exemptions permitted by the Part 264 final standards are almost identical to the exemptions permitted by the interim status standards. The exemptions permitted by the definition of solid waste (§261.2) and under legitimate re-use/recycle/reclaim (§261.6) activities are almost identical for both Parts 264 and 265 of the regulations. One area of dissimilarity, however, occurs when one incinerates an ignitable or corrosive hazardous wastes.

Basically, the interim status standards do not require an owner or operator to file a permit application prior to the incineration of ignitable or corrosive hazardous wastes. They only require one to comply with the closure requirements of §265.351 when incinerating ignitable or corrosive hazardous wastes which do not contain toxic constituents.

In contrast to the interim status standards, the final standards require the owner or operator of a treatment facility to submit a Part B permit application for an incinerator prior to the incineration of any ignitable or corrosive hazardous wastes. This requirement exists irrespective of the absence of any Part 261, Appendix VIII toxic constituents. However, the Regional Administrator is required to exempt the applicant from all of the Subpart O requirements except §264.341 (Waste Analysis) and §264.351 (Closure) if the applicant can show that the waste is hazardous solely because it is ignitable or corrosive and that it does not contain any of the toxic constituents listed in Part 261, Appendix VIII.

An additional exemption may be available if the hazardous waste contains only insignificant concentrations of the toxic constituents listed in Part 261, Appendix VIII. The Regional

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Administrator has the authority to exempt an applicant who incinerates hazardous wastes containing only insignificant concentrations of toxic constituents if the Regional Administrator determines that the hazardous waste will not pose a threat to human health or the environment when incinerated. Since specific limits or guidelines are not provided in the regulations, a Regional Administrator's determination will be on a case-by-case basis and the findings will vary from region to region.

VII. FUME INCINERATORS

The June 24, 1982 Preamble to incineration regulations (47 F.R. 27530) discusses the applicability of any of the incinerator regulations to fume incinerators. Fume incinerators are installed as air pollution control devices pursuant to regulations under the Clean Air Act. In the Preamble EPA states:

... EPA agrees with commenters that fume incinerators are subject only to regulation under the Clean Air Act and does not intend that the Parts 264 and 265 regulations apply to these facilities. Fume incinerators which are used to destroy gaseous emissions from various industrial processes, for example, are not subject to regulation under RCRA.

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In general, the RCRA standards do not apply to fume incinerators since the input is not identifiable as a solid waste, according to the definition set forth in §261.2....

From the foregoing, a strong argument can be made that incinerators whose sole purpose is to destroy gaseous emissions (i.e. tank vapors and VCM gaseous vents) are completely exempt from the RCRA regulations. This argument, however, cannot be relied upon when either liquid, solid, or semi-solid hazardous wastes are incinerated.

VIII. STATE CONSIDERATIONS

A. Louisiana Hazardous Waste Management Plan

1. Definitions

Section 3.0 of the Louisiana Hazardous Waste Management Plan (LHWMP) defines the following:

Hazardous Waste -- a solid waste or combination of solid wastes ... pursuant to provisions of Section 4.1.1 which ... may ... pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Incinerator -- an engineered device using controlled flame combustion to thermally decompose hazardous waste.

Toxic Waste -- a waste subject to these regulations pursuant to provisions of Section 4.1.1 which ... has the potential to endanger human health or other living organisms

2. Identification of Hazardous Waste:

Section 4.1.1 of the LHWMP reads in part as follows:

A. The hazardous waste rules and regulations presented here shall apply specifically to materials identified in one of the following three categories:

CATEGORY I

Those known chemicals and process streams whose hazardous nature have been prescribed by prior determination and which are presented in the form of lists in Appendix A

3. Incinerators:

Section 8.4.8 of the LHWMP reads in part as follows:

(Note: Incinerators which are part of a product process are not subject to these regulations.)

A. Purpose

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To insure necessary combustion and air pollution control to dispose of waste listed in the permit.

B. Requirements

- 1) The Operator shall secure a permit from the Louisiana Air Control Commission.
- 2) The Operator shall provide the Secretary with an acceptable set of performance standards ... and an operations warranty ... certifying that the equipment and operations satisfy the purposes of the permit....

B. State Incineration Standards

1. Incineration of Light Ends

The Louisiana Department of Natural Resources considers incinerators which are part of a product process exempt from the Hazardous Waste Management regulations. (See Note in Section 8.4.8). Therefore, a strong argument can be made that since light ends are only incinerated during the production of HCL, they are part of a product process and, as such, exempt from state regulation.

Although not as strong an argument, we could also claim exemption from state regulation by arguing that the

incineration of light ends is required by NESHAPS and, furthermore, that it is part of a heat or energy recovery operation. All of the aforementioned arguments are strengthened by the fact that light ends are not a Category I hazardous waste as listed in Appendix A of the LHWMP. For these reasons, it does not appear that the incineration of light ends would be regulated by LHWMP.

2. Incineration of Heavy Ends

It is my understanding that the Lake Charles VCM incinerators could be capable of incinerating VCM heavy ends under the proper circumstances. Caution should be exercised in this regard, however. The exemption arguments available for the incineration of light ends may not be available for the incineration of heavy ends. Although the incineration of heavy ends could arguably qualify as part of a HCL product process, the exemption of Section 8.4.8 would probably not apply to their incineration since they are a listed hazardous waste.

Appendix A lists the following heavy ends as Category I Hazardous Wastes: (i) heavy ends from distillation of vinyl chloride in production of vinyl chloride from ethylene dichloride; (ii) heavy ends from distillation of ethylene

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dichloride in vinyl chloride production; and (iii) heavy ends from distillation of ethylene dichloride in ethylene dichloride production. Since heavy ends are a listed hazardous waste, it appears that their incineration would be regulated by the LHWMP.

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