ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 268

[FRL–5642–2]

Land Disposal Restrictions: Treatability Variance for CITGO Petroleum Refinery, Lake Charles, Louisiana

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The EPA is granting a site-specific variance from the Land Disposal Restrictions (LDR) treatment standards for two hazardous petroleum refinery wastes (EPA Hazardous Waste Codes F037 and F038). The variance applies to F037 and F038 nonwastewaters that are removed from a 26 acre surface impoundment (the Surge Pond) located at the CITGO Corporation petroleum refinery outside Lake Charles, Louisiana. EPA is taking this action because the LDR treatment standards that otherwise would apply are based on the performance of technologies that are not appropriate for these wastes at this site. EPA believes that requiring use of the technologies that were the basis of the treatment standards would likely result in net environmental detriment, namely, impeding or preventing the assured remediation of the Surge Pond, including removal and substantial treatment of all remaining Surge Pond sludge. Granting this variance will enable CITGO to complete the removal, treatment, and disposal of the Surge Pond sludge, provided they comply with the alternative treatment standards specified in this rule. EPA has found that removing, treating, and disposing of the sludge in a secure facility is more protective to human health and the environment than the likely alternative, leaving the untreated hazardous waste sludge in place.

EFFECTIVE DATE: This final rule is effective on October 22, 1996.

ADDRESSES: The official record for this rulemaking is identified by RCRA Docket Number F–96–TVLF–FFFF and is located at 1235 Jefferson Davis Highway, First Floor, Arlington, Virginia (the ''Crystal Gateway'' building). The RCRA Docket is open from 9:00 am to 4:00 pm Monday through Friday, except for Federal holidays. The public must make an appointment to review docket materials by calling (703) 603–9230. The public may copy a maximum of 100 pages from any regulatory document at no cost. Additional copies cost $.15 per page.

FOR FURTHER INFORMATION CONTACT: For general information contact the RCRA Hotline at (800) 424–9346 toll-free or (703) 412–9810 locally; TDD (800) 553–7672 or (703) 412–3323. For information on specific aspects of this document, contact Shaun McGarvey, Waste Treatment Branch (Mailcode 5302W), Hazardous Waste Minimization and Management Division, Office of Solid Waste, U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460, at (703) 308–8603.

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I. Background

A. Authority

Under RCRA section 3004(m), EPA is required, as a prerequisite to allowing land disposal of hazardous waste, to establish ''levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized.'' To date, EPA has implemented this requirement by developing technology-based treatment standards, although other approaches are also permissible. HWTC v. EPA, 886 F.2d 355, (D.C. Cir. 1989). The Agency, however, recognizes that there are wastes that cannot or should not be treated to the levels specified in the rules, because the wastes are physically or chemically different from the wastes the Agency evaluated when establishing the treatment standard, or because the treatment technology is inappropriate for the waste. See 51 FR at 40605–40606 (Nov. 7, 1986). For such wastes, EPA established treatability variance procedures that may be used to establish alternative treatment standards on a case-by-case basis. 40 CFR 268.44.

The requirements for a treatability variance are found at 40 CFR 268.44(a), which states:

> Where the treatment standard is expressed as a concentration in a waste or waste extract and a waste cannot be treated to the specified level, or where the treatment technology is not appropriate to the waste, the generator or treatment facility may petition the Administrator for a variance from the treatment standard. The petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from the waste analyzed in developing the treatment standard, the waste cannot be treated to specified levels or by the specified methods.

EPA uses this standard to approve site-specific variances and variances that have more general applicability. See § 268.44(h) and 53 FR at 31199–31200 (August 18, 1988). Except for their potential applicability, the main difference between site-specific and general variances is that EPA may permissibly use procedures less formal than Administrative Procedure Act notice and comment rulemaking when processing site-specific treatability variance applications (see 53 FR at 31199–31200). However, because CITGO's application raises issues that may be of national interest (notwithstanding applicability of the rule to a particular facility), EPA used APA notice and comment procedures to process CITGO's application, even though the variance will apply only to specific wastes generated by remediation of the Surge Pond at CITGO's Lake Charles, Louisiana facility. Thus, today's action can be said to be pursuant to both §§ 268.44(a) and (h).

For a more thorough discussion of the conditions which justify approving a treatability variance and the supporting information the petitioner is required to submit, please refer to the November 7, 1986 Federal Register (51 FR at 40605–40606), as well as the September 19, 1994 Federal Register (59 FR at 48023).

B. Site Description

The surface impoundment containing the waste addressed by this variance is located at CITGO Corporation's Lake Charles Refinery, 4401 Louisiana Highway 108 in Calcasieu County in the southwest corner of Louisiana. The

surface impoundment in question, referred to as the ''Surge Pond'' in CITGO's application, is situated immediately adjacent to the west bank of the Calcasieu River, approximately 10 miles southwest of Lake Charles and 15 miles north of the Sabine National Wildlife Refuge. The Surge Pond has a surface area of twenty six (26) acres. Much of the pond is 15 to 20 feet deep; the deepest part is about 40 feet deep. The water surface elevation of the pond is six feet above sea level; the water layer is about 15 feet deep.

Wastewater from the Surge Pond discharges into an old on-site wastewater treatment system. This system consists of an earthen equalization basin, followed by dissolved air flotation (DAF) tanks, a settling pond, and a polishing pond. It discharges into the Calcasieu river at an NPDES regulated outfall (Permit Number LA0005941). The bottom of the pond is filled with sludge which has been accumulating since the 1940's. The Sludge remaining in the Surge Pond is the subject of this variance. (CITGO's application for a treatability variance only includes sludge from the Surge Pond; it does not include any sludge generated by the rest of the old wastewater treatment system, including sludge generated by any remediation of the system.)

CITGO has been operating a new on-site wastewater treatment system since May 13, 1994. This system now receives process wastewater and storm water from the site. The new system consists primarily of above ground tanks with floating roofs. Air emissions from the tanks are routed to a vapor control system. The new wastewater treatment system flows from the API separators to an equalization tank, to a DAF unit, to aerated activated sludge tanks, to a clarifier. Clarifier effluent is discharged to the settling pond of the old wastewater treatment system and eventually through the NPDES regulated outfall to the Calcasieu River.

C. History of Surge Pond Remediation

The CITGO Surge Pond is a hazardous waste surface impoundment and, thus, is subject to requirements for closure and corrective action. See, e.g., 40 CFR 264.101; 40 CFR 264.110. In early 1993, CITGO conducted feasibility studies to compare and evaluate their options for closing the Surge Pond. They decided to pursue an option that involved removal of sludge from the Surge Pond followed by substantial treatment, oil recovery, and secure disposal at an off-site Subtitle C facility. This remediation strategy was approved by the State of Louisiana Department of Environmental Quality in December 1993. Following state approval, CITGO designed, constructed and began operating an on-site treatment system for treatment of Surge Pond sludge.

At the time CITGO chose the sludge removal and treatment option there was a national capacity variance for F037 and F038 nonwastewaters which extended the effective date of the applicable LDR treatment standards. CITGO planned to complete removal, treatment, and disposal of all the Surge Pond sludge before the national capacity variance expired; however, they were unable to meet this deadline due to unforeseen contractor delays. When the national capacity variance expired (June 30, 1994), remediation was stopped because the treatment system could not meet the treatment standards for all of the regulated constituents in Surge Pond sludge, and CITGO applied for a treatability variance.

For a more detailed discussion of the regulatory and remediation history at the CITGO Surge Pond see the preamble to the proposed rule at 59 FR 44686 (August 20, 1994) and CITGO's application for a site-specific treatability variance (available in the docket for today's rulemaking).

D. Waste Description

The Surge Pond received untreated petroleum refining process water and storm water runoff from the site for most of the site's history. Under normal operation, the Surge Pond received sanitary oxidation pond effluent, ballast water, storm water runoff from the refinery complex, CPI separator effluent, and, potentially, controlled cooling tower blowdown. The sludge at the bottom of the Surge Pond, therefore, is a primary sludge generated by the settling of petroleum refining wastewater and meets the definition of RCRA Hazardous Waste Codes F037 and F038. Sampling and analysis of the sludge was performed in 1993 as part of a feasibility study conducted by CITGO for the purpose of evaluating pond closure options, and again in February and March 1994 for this treatability variance petition. Concentrations of hazardous constituents in the untreated sludge are summarized in Appendix 1.

This application involves approximately 375,000 tons of sludge which remain in the surface impoundment. CITGO and its contractors have in fact removed and treated over 500,000 tons of sludge up to June 30, 1994—the time the land disposal prohibition for F037 and F038 wastes took effect.

E. Description of Proposed Treatment

Upon promulgation of this variance, CITGO will use an on-site treatment system to recover oil from, and substantially reduce the toxicity and mobility of, regulated hazardous constituents in the Surge Pond sludge. This treatment system will consist of air sparging in tanks to remove volatile organic constituents, followed by sludge dewatering. Dewatered sludge will be mixed with lime or flyash to stabilize metals and provide structural integrity. Stabilized sludge will be sent for land disposal at Chemical Waste Management's Subtitle C landfill in Carlyss, Louisiana. The liquid phase from the dewatering units will be routed to tanks functioning as oil-water separators for recovery of oil. The aqueous discharge (wastewater) from the separators will be discharged back into the Surge Pond and from there through the old wastewater treatment to the NPDES regulated outfall at the Calcasieu river.

Air emissions from the treatment system will be routed to a vapor control system, permitted by the State of Louisiana Department of Environmental Quality, for removal of hydrogen sulfide and destruction of the volatile organics. In addition the sludge treatment system will have to be operated in accordance with air emission standards specified by:

(1) 40 CFR Part 61—National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart FF: National Emission Standard for Benzene Waste Operations, § 61.348 Standards: Treatment Processes. (This regulation requires removal of benzene from the waste stream to a level less than 10 parts per million by weight (ppmw) on a flow-weighted annual average basis, and gives specifications for the design and operation of the vapor control system);

(2) 40 CFR Parts 264 and 265—Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities; Subpart CC—Air Emission Standards for Tanks, Surface Impoundments, and Containers (assuming that the volatile organic concentration at the point of waste origination—that is, in the impoundment—exceeds the trigger level specified in those rules, which appears to be the case). (The Subpart CC rules require that tanks storing or treating hazardous wastes to which the rule applies be equipped with covers and control devices to capture and destroy volatile emissions or otherwise to control emissions from the tanks to protective levels. See 40 CFR 264.1084

and 264.1091; and 265.1085 and 265.1091); and,

(3) Any additional requirements specified by the Louisiana Department of Environmental Quality.

EPA believes that compliance with the Benzene NESHAP and (if applicable) the subpart CC rules will ensure that the treatment unit will operate in a protective manner and will not serve as a conduit for cross-media transfer of volatile hazardous constituents (or, for that matter, volatile constituents in general). Cf. *Chemical Waste Management* v. *EPA*, 976 F. 2d at 17, 18.

Before the national capacity variance expired, CITGO treated approximately 500,000 tons of Surge Pond sludge, using the treatment strategy described above. Performance data from this treatment is presented in Appendix 2. While the treatment system used previously has been dismantled, EPA expects the new treatment system will be at least as effective as the old system. According to CITGO's variance application, the engineering for both the new and the old treatment systems are identical.

F. Summary of Proposed Rule

CITGO submitted a site-specific treatability variance petition to EPA on April 13, 1994, and submitted additional materials in response to EPA's request. The petition requested that EPA establish alternate LDR standards for F037 and F038 nonwastewaters generated by remediation of the Surge Pond, thereby allowing CITGO to continue the Surge Pond cleanup including land disposal of treated Surge Pond sludge.

As justification for the variance petition, CITGO stated that combustion is not an appropriate technology for Surge Pond sludge because:

(1) the tremendous quantity of wastes generated by this remediation exceeds the annual excess capacity available nationwide for F037 and F038 wastes;

(2) the metal content of this waste (4,084 ppm reported average) is higher than that of typical F037 and F038 wastes; and,

(3) the hazards of transporting the waste long distances for offsite incineration exceed the hazards of treating the waste onsite and disposing the residuals in the subtitle C landfill in Carlyss, seven miles from the site.[1]

CITGO also claimed that cement kiln combustion is inappropriate for this waste due to the low BTU content (less than 2,000 BTU/lb) of the waste, and stated that, ''When compared with other treatment options, the CITGO approach is clearly the safest for the environment and human health.'' After careful evaluation of CITGO's petition, EPA proposed to approve a treatability variance for the F037 and F038 nonwastewaters generated by the remediation of the Surge Pond based on a finding that application of the LDR treatment standards was not appropriate to sludge generated by remediation of the CITGO Surge Pond. 59 FR 44684 (August 30, 1994).

II. Basis for Treatability Variance

A. EPA's Interpretation of When a Treatment Standard Is ''Not Appropriate''

EPA's rules on treatability variances provide that EPA may approve a variance ''[w]here the treatment standard is expressed as a concentration in a waste . . . and a waste cannot be treated to the specified level, *or where the treatment technology is not appropriate to the waste. . .*'' 40 CFR 268.44(a) and (h) (emphasis added). Before discussing the application of these rules to CITGO's specific circumstance, there is a threshold issue regarding EPA's interpretation of the clause in the treatability variance rule authorizing variances ''where the treatment technology is not appropriate to the waste.''

EPA's longstanding and consistent interpretation is that a treatment standard based on the performance of BDAT can be inappropriate where it leads to environmentally counterproductive results, in particular, where it may impair environmental cleanups such as closure or site remediation—the situation EPA finds is presented by CITGO's application. Thus, in promulgating the National Contingency Plan under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EPA stated:

> EPA's experience under CERCLA has been that treatment of large quantities of soil and debris containing relatively low levels of contamination using LDR ''best demonstrated available technology'' (BDAT) is often inappropriate. . . Experience with the CERCLA program has shown that many sites will have large quantities—in some cases, many thousands of cubic meters—of soils that are contaminated with relatively low concentrations of hazardous wastes. These soils often should be treated, but treatment with the types of technologies that would meet the standard of BDAT may yield little if any environmental benefit over other treatment based remedial options. . . .Based on EPA's experience to date and the virtually unanimous comments supporting this conclusion, EPA has determined that. . .current BDAT standards are generally inappropriate or unachievable for soil and debris from CERCLA response actions and RCRA corrective actions and closures.

55 FR 8666, 8760 (March 8, 1990). In linking this discussion to the language of the treatability variance rule, the Agency explained that: ''EPA's rules on treatability variances recognize that prohibited wastes be treated by appropriate technologies. The rules thus state that a petitioner may request a treatability variance 'where the treatment technology is not appropriate to the waste.' '' *Id.* at 8761. The Agency likewise stated specifically in the same notice that ''EPA does not interpret its site-specific variance procedures as invariably requiring applicants to demonstrate that they cannot meet applicable treatment levels or methods. The first sentence of § 268.44(h) makes it clear that an applicant may make one of *two* demonstrations to qualify for a variance: he may show either that he cannot meet a treatment standard, *or* that a treatment method (or the method underlying the standard [)] is inappropriate for his waste.'' Id. at 8762 n. 22.

EPA reiterated this interpretation most recently in the proposed Hazardous Waste Identification Rule for contaminated media. EPA there stated that ''[i]n other cases, the generic treatment standard will be inappropriate because use of an alternative treatment standard would result in a net environmental benefit.'' 61 FR 18780, 18811 (April 29, 1996). See also 53 FR at 31200 (August 17, 1988) (''On a site-specific basis, it may be possible to determine that BDAT treatment is inappropriate for a particular waste stream. For example, incineration of large volumes of contaminated soil under certain site-specific conditions may be found to be inappropriate treatment.'')

Some commenters on the proposed CITGO treatability variance argued that this language—that is, the ''not appropriate'' clause—only applies where the treatment standard for the waste is a designated method of treatment, and so does not apply where the treatment standards are expressed as numerical values. EPA has never limited its interpretation in this way, as just shown. Moreover, EPA's reading of its own rules is entirely reasonable.

First, the language of the variance provision does not preclude EPA's

[1] EPA notes that the Agency does not believe it necessary to reach CITGO's comparative risk argument regarding risk posed by sludge transport to off-site treatment. CITGO's other points are discussed in the August 30, 1994 proposal, in this preamble, and in the background documents for this rule.

reading, since the rule does not define the circumstances under which a treatment technology may be inappropriate. Nor would it be reasonable to read the clause as applying only to situations where the standard requires use of a designated method of treatment, since the rules already contain a separate provision authorizing petitions to use alternative treatment methods upon a showing of equivalent performance. 40 CFR 268.42(b). In light of this separate provision, the ''not appropriate'' clause in §§ 268.44(a) and (h) would have little scope unless interpreted to apply to all treatment standards.

Second, EPA's interpretation reflects a reasonable policy choice. In the remediation context, site decision makers are often faced with the choice of either capping or treating wastes in place (thereby avoiding application of LDRs) or excavating and triggering BDAT treatment standards. In such cases, the most cost effective choice is often to leave waste in place if the only alternative is BDAT treatment. 54 FR 15566, 15568 (October 10, 1989); 55 FR at 8760–62; 61 FR at 18812. This creates an incentive to favor remediation options that minimize LDR applicability (e.g., by leaving waste in place), a result obviously not contemplated by Congress in enacting the LDRs. 54 FR 41566–41569, October 10, 1989.

It is entirely rational to view as ''inappropriate'' imposition of a treatment technology that results in (or reasonably could result in) the environmentally detrimental result of no cleanup and no treatment. Indeed, there is a legitimate question whether a technology whose use results in foregoing other, substantial environmental benefits can be considered to be a ''best'' technology. *Portland Cement Association* v. *Ruckelshaus*, 486 F. 2d 375, 385–86 at n. 42 (D.C. Cir. 1973); *Essex Chemical Corp.* v. *Ruckelshaus*, 486 F. 2d 427, 439 (D.C. Cir. 1973). *See also Chemical Waste Management* v. *EPA*, 976 F. 2d 2, 16 (D.C. Cir. 1992), cert. denied 113 S.Ct. 1961 (1993) (treatment sufficient to satisfy section 3004(m) need not be based on performance of best demonstrated available technology); and, the legislative history of section 3004(m), 130 Cong. Rec. S. 9178 (daily ed. July 25, 1984). (The intent of 3004(m) is to require utilization of available technology in lieu of continued land disposal without prior treatment, not that every waste receive repetitive or ultimate treatment.)

B. Application of EPA's Interpretation of When a Treatment Standard Is ''Not Appropriate'' to CITGO

After considering the comments on the August 30, 1994 proposal, EPA continues to find, as discussed in the proposal and in this preamble, that it is not appropriate within the meaning of §§ 268.44(a) and (h) to require treatment of Surge Pond sludge to levels based on the performance of combustion or solvent extraction technologies (the technologies on which the LDR treatment standards for F037 and F038 nonwastewaters are based) and that a treatability variance is, therefore, warranted. In CITGO's specific circumstance, EPA finds that requiring use of BDAT technologies would delay and possibly preclude removal of remaining sludge from the Surge Pond by encouraging CITGO to pursue remedial options that would minimize LDR applicability. Debate over these remedial alternatives would, at a minimum, further delay completion of Surge Pond remediation and could result in some or all of the remaining sludge being left in the Surge Pond with little or no treatment.

Today's treatability variance will assure protective remediation of the Surge Pond, that is, removal of Surge Pond sludge followed by substantial treatment (including oil recovery) and secure disposal of treated sludge in an off-site subtitle C facility. *Id.* at 44687. EPA views this result as environmentally preferable to other remedial options that CITGO could legally pursue (i.e., leaving the sludge in the Surge Pond), given that debate over these options would, at a minimum, significantly delay completion of Surge Pond remediation. *Id.* EPA believes the benefits of assured Surge Pond remediation, that is, removal of remaining sludge followed by substantial treatment (including oil recovery) and secure disposal in an off-site subtitle C facility (as proposed by CITGO and approved by the State of Louisiana Department of Environmental Protection), are superior to applying the treatment standard, because doing so would likely further delay sludge removal and possibly result in some or all of the sludge remaining in the Surge Pond untreated. Consequently, EPA is finding that requiring treatment based on the performance of BDAT is not appropriate to F037 and F038 nonwastewaters generated by CITGO's Surge Pond remediation because, in CITGO's specific circumstance, it would most likely result in net environmental detriment.

EPA is also finding that under the circumstances presented here, threats posed by land disposal of Surge Pond sludge—including current and potential threats posed by sludge remaining in the Surge Pond—are minimized (within the meaning of § 3004(m)) by the combination of removal of remaining sludge from the Surge Pond followed by substantial treatment (including oil recovery) and secure disposal in an off-site subtitle C facility.

In further support of these determinations, EPA notes:

(1) CITGO's remediation approach includes substantial treatment which will reduce the toxicity and mobility of all regulated constituents in the Surge Pond sludge and achieve treatment levels for benzene (the most hazardous constituent in the waste based on concentration, toxicity, and availability) and chromium, nickel, and cyanide. There is no question that sludge generated by Surge Pond remediation must be treated. The question is whether the Agency must apply BDAT treatment requirements (risking, as discussed above, delaying, if not precluding, assured Surge Pond remediation and potentially resulting if some or all sludge remaining in the Surge Pond untreated), or whether, in this specific case, alternative LDR treatment standards can be approved.

(2) The CITGO remediation strategy, including removal of all remaining sludge from the Surge Pond and the subsequent treatment, oil recovery and secure off-site disposal, was approved by the Louisiana Department of Environmental Quality as protective of human health and the environment. The Louisiana Department of Environmental Quality is authorized by EPA to administer the Federal RCRA program for closure of hazardous waste management units—the situation at CITGO. While EPA approval or concurrence is not typically required for individual actions in authorized states, EPA staff in Region 6 monitor the performance of authorized states, including Louisiana, and agree with the remedial strategy at CITGO.

(3) The remediation of the CITGO Surge Pond, including sludge treatment, was successfully on-going when it was interdicted by a new land disposal prohibition and treatment standard. When sludge from CITGO's Surge Pond became subject to the F037 and F038 LDR treatment standards, the remediation had to be stopped because the on-site treatment system could not meet the Treatment standards for all of the regulated constituents. EPA believes it is appropriate, in this case, to allow the state-approved remediation to

continue rather than to invest considerable resources in developing—and probably litigating—a new remedial strategy for the Surge Pond. EPA believes these resources are more properly directed at timely completion of Surge Pond remediation, including assured removal and substantial treatment of all remaining sludge.

(4) The variance applies only to sludge generated as a result of Surge Pond remediation. Newly-generated F037 and F038 wastes thus have to be treated in compliance with the existing treatment standards before they can be land disposed. As EPA has repeatedly discussed, treatability variances are often warranted for wastes generated in the context of remediation.

(5) Remediation of the CITGO Surge Pond involves tremendous volumes. CITGO estimates that 375,000 tons of sludge remain in the Surge Pond. While, as clarified below, EPA is not approving today's treatability variance based on insufficient treatment capacity, the economies of scale associated with this volume of waste supports the Agency's finding that, if BDAT treatment is required, CITGO will likely pursue legal remedial options that minimize LDR applicability (including leaving some or all of the sludge in the Surge Pond) and further delay remediation.

C. Effect of This Variance on Other Remedial Actions

The decision to approve a treatability variance and alternative LDR treatment standards for F037 and F038 nonwastewaters generated by remediation of the CITGO Surge Pond is specific to CITGO's circumstances and will not apply to any other sites or wastes. Furthermore, EPA does not intend or view this action as creating an incentive to avoid treatment of process wastes in remedial situations by the mechanism of resisting remedial options that trigger LDRs unless a treatability variance is approved. The facts at CITGO are unusual and may not arise again. Specifically, this is a situation where an on-going, successful, state-approved remediation was interdicted by a new LDR prohibition. The remedial strategy includes removal of all sludge from the Surge Pond followed by substantial treatment (including BDAT treatment of the most hazardous constituent and three other hazardous constituents), oil recovery, and secure disposal in an off-site Subtitle C facility. Approving the treatability variance assures completion of Surge Pond remediation including removal and substantial treatment of all remaining Surge Pond sludge. Denying the variance may lead to a prolonged debate on how to remediate the impoundment, and could result in some or all sludge remaining in the Surge Pond untreated.

III. Treatment Standards

A. Existing F037 and F038 Nonwastewater Treatment Standards

The listings for F037 and F038 were promulgated on November 2, 1990 (55 FR 46354) and amended May 13, 1991 (56 FR 21955). LDR treatment standards for F037 and F038 nonwastewaters were promulgated on August 18, 1992, 57 FR at 37271, 37274. The F037 and F038 nonwastewater treatment standards set total concentration limits for 14 hazardous organic constituents based on the performance of combustion or solvent extraction (determined to be BDAT), TCLP leachate concentration limits for nickel and chromium based on stabilization (generally the BDAT technology for metals), and, a total cyanide standard based on combustion.

B. Alternative F037 and F038 Nonwastewater Standards Approved for Use During Surge Pond Remediation at CITGO.

EPA is establishing alternative treatment standards for 14 of the 17 regulated F037 and F038 hazardous constituents. Alternative treatment standards were not established for di-n-butyl phthalate, bis (2-ethylhexyl) phthalate, and phenol, because these constituents were not detected in samples of pond waste collected for the variance petition. For benzene (the most hazardous constituent in this case) and chromium, nickel, and cyanide, the alternative treatment standards are identical to the existing treatment standards. For the other 10 regulated constituents, EPA calculated alternative standards based on data from samples of waste treated by the Aran unit [2] of CITGO's on-site sludge treatment system. In calculating these standards, EPA omitted data points for samples that did not meet the 10 mg/kg limit for benzene (CITGO's own measure of when the Aran unit was operating properly). The Agency then multiplied the mean treated concentration (from the 9 waste samples which met the benzene limit) by a variability factor calculated as per the equation established by *Final BDAT Background Document for Quality Assurance/Quality Control Procedures and Methodology,* Appendix D. Treatment system performance data submitted with CITGO's variance petition is summarized in Appendix 2 following this preamble. More information on the treatment system, sampling and analysis procedures, and the calculation of alternative standards is available in the Background Document for today's rule.

Since treated sludge from the CITGO Surge Pond remediation will remain hazardous waste, it may only be land disposed in a Subtitle C facility. The CITGO Alternative LDR Treatment Standards are summarized in the table below.

CITGO ALTERNATIVE LDR TREATMENT STANDARDS

Regulated hazardous constituent	CAS No.	Concentration in mg/kg unless noted as "mg/l TCLP"
Anthracene	120–12–7	20
Benzene	71–43–2	10*
Benz(a)anthracene	56–55–3	19
Benzo(a)pyrene	50–32–8	19
Chrysene	218–01–9	29
Ethylbenzene	100–41–4	39
Naphthalene	91–20–3	120
Phenanthrene	85–01–8	120
Pyrene	129–00–0	39
Toluene	108–88–3	33
Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330–20–7	150

[2] The Aran Unit is a sludge dewatering unit.

CITGO ALTERNATIVE LDR TREATMENT STANDARDS—Continued

Regulated hazardous constituent	CAS No.	Concentration in mg/kg unless noted as ''mg/l TCLP''
Chromium (total)	7440–47–3	0.86 mg/l TCLP*
Cyanides (total)	57–12–5	590*
Nickel	7440–02–0	5.0 mg/l TCLP*

* Standard is identical to UTS.

In order to ensure protection of human health and the environment, EPA is also imposing standards on the operation of CITGO's treatment system. First, the treatment system must be operated in accordance with applicable air emission standards specified by: (A) 40 CFR Part 61—National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart FF: National Emission Standard for Benzene Waste Operations, § 61.348 Standards: Treatment Processes; (B) CFR Parts 264 and 265—Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, Subpart CC—Air Emission Standards for Tanks, Surface Impoundments, and Containers (if applicable); and, (C) any additional requirements specified by the Louisiana Department of Environmental Quality (LDEQ).

Second, the treatability variance will be valid for 24 months only, commencing at the date the Surge Pond closure plan is approved by the Louisiana Department of Environmental Protection. CITGO may petition for additional time if unforeseen delays occur, provided they can demonstrate a good faith effort to complete the Surge Pond remediation, including sludge treatment, within the original specified time frames.

IV. Public Comments and EPA Responses

The issues raised by comments to the proposed rule which affected the final decision to approve this variance and the variance conditions and EPA's responses to these issues, are presented below. Please also refer to the Response to Comments and Background Documents for this rulemaking, available at the RCRA Docket, for presentation of additional issues and EPA responses.

Issue 1: One commenter stated that the proposed variance violates the requirement of § 268.44(a) that the ''petitioner must demonstrate that the waste cannot be treated to specified levels or by specified methods due to the chemical or physical properties of the waste.''

EPA Response: As discussed above, EPA has decided to approve this treatability variance because the treatment technologies upon which the F037 and F038 treatment standards are based are ''not appropriate to the waste.'' This condition is sufficient to make waste eligible for a treatability variance under 40 CFR 268.44(a) and (h).

Issue 2: One commenter doubted whether CITGO would seek to leave remaining sludge in the Surge Pond even if a treatability variance were denied and stated that, in any case, EPA should use its closure and corrective action authorities to require sludge removal and treatment to promulgated treatment standards.

EPA Response: EPA continues to believe that, if the costly BDAT treatment standard is imposed, CITGO will likely pursue legal remedial options that minimize LDR applicability due to their understandable desire to pursue a cost-effective strategy for Surge Pond remediation considering the enormous volume of waste involved. This is consistent with EPA's experience in implementing remedial programs such as CERCLA and RCRA Corrective Action and with information submitted by CITGO. Debate over this issue will undoubtably delay, if not preclude, removal and substantial treatment of the remaining sludge in the Surge Pond. For that reason, EPA has found that application of BDAT to CITGO's specific circumstance is inappropriate. 61 FR at 18812; 55 FR at 8760–8762.

In further support of this finding, EPA notes that the standards for closure of a surface impoundment under 40 CFR 265.111(b) and 265.228 do not necessarily require removal of all waste. Similarly, the requirements for corrective action do not necessarily require the removal and treatment of Surge Pond sludge if other remedial options were found to be consistent with Agency guidance and protective of human health and the environment. See RCRA sections 3004(u) and 3004(v); 40 CFR 264.101. CITGO retains the option under § 265.228 of not resuming the sludge removal operation and closing the impoundment with the waste in place, provided they can satisfy the requirements for post-closure care for a landfill under Subpart G (§ 265.111) and § 265.310. Public comments submitted by CITGO confirm that the company is considering this option seriously, and will likely pursue it if this variance is denied. The technical standards for closure in place require removal of free liquids, stabilization of wastes in order to support a final cover over the unit, and prevention of infiltration of liquids during the post-closure care period, as well as minimization of releases from the unit during the post-closure period to the extent necessary to protect human health and the environment. See generally 40 CFR 265.228 and 265.111(b).

Approval of an in-place closure or a given corrective action remedy depends on many site-specific factors. At this stage, it is not clear to EPA that leaving the sludge in the Surge Pond at CITGO is a technically feasible alternative, due in particular to the volume of standing water in the impoundment, plus the fact that the water table at the site is high and so may infiltrate into the unit. Nevertheless, EPA cannot now rule out the possibility that leaving some or all of the untreated sludge in the Surge Pond could be allowed through some combination of draining all liquids, using chemical treatment to stabilize sludge so that a cap could be supported, and building some type of below-ground barrier to prevent infiltration. CITGO has established their intention to pursue leaving the untreated sludge in the Surge Pond if their only other option for treatment of Surge Pond sludge is BDAT (i.e., if this variance is not approved). In support of this strategy, CITGO has submitted soil survey results which indicate the presence of a clay layer beneath the impoundment which could possibly serve as the foundation for such a barrier; the barrier would be completed by constructing vertical slurry walls to connect to this clay layer.

It is clear to EPA that a debate over remedial options that minimize LDR applicability to Surge Pond sludge would be contested and protracted and would, at the least, significantly delay Surge Pond remediation leaving 375,000

tons of sludge in place in an unlined impoundment. While, as set out at 40 CFR 265.112(d)(4), EPA (or, as in this case, the authorized State administering the program) retains the right to disapprove a submitted closure plan, review possible modifications, and ultimately to modify any submitted plan to be consistent with substantive standards for closure, a company could contest any such determination necessitating enforcement by the Agency with ultimate, protracted judicial resolution. EPA estimates that at CITGO this process would take years. During that time, there could be multimedia releases from the impoundment (although the corrective action rules and orders would mitigate the extent of any such releases), plus an uncertain prospect of ever forcing sludge removal. EPA believes that, in CITGO's specific circumstance, it is appropriate to avoid such a debate and, instead, direct resources at timely completion of Surge Pond remediation, given that the proposed remedial alternative is protective of human health and the environment and involves the environmentally desirable result of removal of all remaining sludge from the Surge Pond followed by substantial treatment (including oil recovery) and secure disposal in an off-site Subtitle C facility.

Issue 3.: One commenter stated that EPA's claim that incineration is not ''appropriate'' due to the tremendous volume of the waste directly contradicts previous EPA statements that treatability variances will not be approved on the basis of insufficient capacity.

EPA Response: EPA clarifies that today's variance is not being approved on the basis of insufficient treatment capacity.[3] The commenter correctly states that EPA said in the Federal Register notice establishing the treatability variance process (51 FR at 40606, November 7, 1986) that treatability variances may not be approved on the basis of capacity since other rules already provide for capacity variances. EPA is approving this variance on the basis that requiring treatment based on the performance of BDAT is, in CITGO's specific circumstance, inappropriate because it would likely result in a net environmental detriment (i.e, further delay of Surge Pond remediation). Although today's variance is not being approved based on insufficient treatment capacity, EPA notes that the cost of treating such a huge quantity of waste to BDAT standards could be prohibitive, thus compelling CITGO to seek cost-effective alternatives to BDAT treatment (i.e, combustion or solvent extraction). This observation supports EPA's finding that denying the variance will, at the least, further delay Surge Pond remediation.

Issue 4.: One commenter stated that, ''CITGO acknowledges its treatment system design was never intended to remove all 17 regulated hazardous constituents. By virtue of this admission alone, the proposed variance violates Section 3004(m) of RCRA. *Chemical Waste Management* v. *EPA , supra,* where the Court held that Section 3004(m) of RCRA requires that the threat posed by all hazardous constituents in a waste be minimized prior to land disposal.''

EPA Response: EPA's interpretation of ''minimize threats'' does not necessarily require BDAT treatment of all regulated constituents in every prohibited waste. As EPA stated in the Craftsman/Northwestern treatability variance, ''The language of § 3004(m) allows EPA latitude in determining what treatment minimizes waste toxicity and mobility. It does not mandate a technology-forcing approach. The legislative history likewise indicates that Congress did not necessarily envision technology-forcing § 3004(m) treatment standards. Rather, such standards were intended to force use of generally available effective types of treatment.'' (56 FR at 12355, March 25, 1991; see also 55 FR 6640–6643 (February 26, 1990); 61 FR at 18018 (April 29, 1996).) Moreover, the very opinion cited by the commenter makes clear that BDAT treatment is not compelled to meet a treatment standard (976 F. 2d at 15–16).

The CITGO treatment system was designed primarily to treat volatile organics (with a focus on benzene) and stabilize metals. The system achieves BDAT treatment levels for benzene and substantially treats the other volatile constituents (toluene, xylene, and ethylbenzene). While it might be possible to achieve additional reductions in concentrations of the other volatile constituents (toluene, xylene, and ethylbenzene) by engineering modifications to the air sparging tanks or increasing the treatment residence time, EPA believes that requiring additional treatment for these relatively low-risk constituents could seriously delay the completion of Surge Pond remediation and could (through this delay) result in greater emissions of more toxic constituents from the pond to the air.

Although the proposed treatment system was not designed for semivolatile organics (e.g. anthracene, chrysene), data from CITGO's variance petition shows that the treatment system does yield reductions in concentrations of these constituents. In addition, the semivolatile constituents which remain in the treated sludge will be much less mobile after the waste is solidified and will be further safeguarded by disposal in an off-site subtitle C landfill. The treatment system achieves treatment levels for the chromium, cyanides, and nickel.

It is EPA's judgment that requiring BDAT treatment of sludge generated by remediation of the CITGO Surge Pond would likely result in a net environmental detriment by, at least, substantially delaying Surge Pond remediation and potentially resulting in some or all of the sludge remaining in the Surge Pond untreated. It is the Agency's view that the combination of assured sludge removal, followed by treatment to substantially reduce toxicity and mobility of the regulated constituents plus oil recovery, and disposal of the treated sludge in an off-site subtitle C facility adequately minimizes threats posed by land disposal of the waste under these circumstances. Although this treatment strategy does not represent BDAT as promulgated for F037 and F038 nonwastewaters, it ''substantially diminish[es] the toxicity of the waste'' and ''substantially reduce[s] the likelihood of migration of hazardous constituents from the waste'' as required by Section 3004(m).

Issue 5.: One commenter stated that, ''Even the inadequate treatment contemplated by CITGO is not accompanied by binding requirements to ensure achievement of that level of efficiency. The lack of proposed treatment standards for most of the regulated constituents violates the minimize threat mandate of RCRA.''

EPA Response: EPA has reconsidered this issue and has decided to establish binding alternative treatment standards for all F037 and F038 regulated constituents that were detected in the Surge Pond sludge, as discussed above.

Issue 6.: One commenter suggested imposing a time limit on the treatability variance to ensure the work is done in a timely manner to protect human health and the environment. The commenter suggested an 18 month time limit from the date CITGO awarded the Surge Pond sludge treatment contract. Another commenter opposed the imposition of a time limit, stating that, ''it is not possible to predict with accuracy the time required for

[3] EPA thus disagrees with CITGO that the volume of waste alone is justification for approval of a variance.

completion of closure. It is thus not appropriate to establish an expiration date for the variance, nor is such contemplated under EPA's rules.''

EPA Response: EPA has decided to impose a time limit for this treatability variance, as discussed above. First, the Agency disagrees that it is without power to impose a time condition on the variance. There is nothing in the treatability variance rule, or in RCRA generally, which so restricts EPA's authority. Control of timing here is necessary to assure that the expected environmental benefits, which are the reason for approving the petition, actually accrue. Allowing CITGO unlimited time to complete the remediation would contradict EPA's assertion that it is approving this variance, in part, to ensure that Surge Pond remediation, including sludge removal and treatment, are completed as soon as possible.

EPA considered a time limit of 18 months from the date CITGO awards the sludge treatment contract as suggested by one commenter; however, discussions with CITGO lead the Agency to believe that this limit may not be practical. CITGO has stated in its public comments that prior to resuming sludge removal and treatment operation, it will have to prepare a bid package, review bids, reconstruct the treatment system, and obtain renewed approval for air emissions from the State. CITGO also indicated that one of their main concerns with the proposed time limit was the uncertainty posed by the time required to obtain final approval of the pond closure plan by the State, and that this concern would be lessened by linking the time limit to final approval of the closure plan. In conversations with the Agency, CITGO estimated that two years would be required to complete the pond remediation.

EPA has decided to establish a 24 month time limit for this treatability variance, calculated from the date the Surge Pond closure plan is approved by the Louisiana Department of Environmental Protection. The Agency believes it is reasonable to allow the effective period of this variance to begin with the closure plan approval. In addition, allowing 24 months for the completion of the remediation is consistent with EPA practice of allowing 18 to 24 months for the development and optimization of treatment capacity between the promulgation and the effective date of new LDR rules.

EPA recognizes that unforeseen circumstances, such as accidents, equipment malfunctions, or natural disasters, may prevent CITGO from completing this remediation within the established time limit. Under such extenuating circumstances, the Agency would not want the time limit to act as a disincentive to the completion of the sludge removal and treatment operation. Therefore, CITGO may petition for additional time if such unforeseen delays occur, provided they can demonstrate a good faith effort to complete the remediation. (The fact that the company has already removed and treated 500,000 tons of the sludge provides an objective track record to support the Agency's belief that the company will promptly act to complete its remediation efforts and clean close the impoundment.)

V. Analysis Under Executive Order 12866, the Unfunded Mandates Reform Act of 1995, the Regulatory Flexibility Act, and the Paperwork Reduction Act

This treatability variance does not create any new regulatory requirements. It merely establishes alternative treatment standards for specific wastes which replace standards already in effect. This rule is, therefore, not a ''significant'' regulatory action within the meaning of Executive Order 12866.

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), P.L. 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's rule contains no Federal mandates (under the regulatory provisions of Title II of the UMRA) for State, local, or tribal governments or the private sector, and does not impose any Federal mandate on State, local, or tribal governments or the private sector within the meaning of the Unfunded Mandates Reform Act of 1995. This final rule does not create new regulatory requirements; rather, it merely establishes alternative treatment standards for specific wastes which replace standards already in effect. EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA. For the same reasons, EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments.

This treatability variance does not create any new regulatory requirements. It merely establishes alternative treatment standards for a specific waste which replace standards already in effect, and it applies to only to the CITGO Lake Charles, Louisiana site. Thus, this rule would not have a significant impact on a substantial number of small entities. Therefore, EPA provides the following certification under the Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act: Pursuant to the provision at 5 U.S.C. 605(b), I hereby certify that this final rule will not have a significant economic impact on a substantial number of small entities. It does not impose any new burdens on small entities. This rule, therefore, does not require a regulatory flexibility analysis.

Finally, because this treatability variance only changes the treatment standards applicable to F037 and F038 nonwastewaters at the CITGO Lake Charles, Louisiana site, and does not change in any way the paperwork requirements already applicable to these wastes, it does not affect requirements under the Paperwork Reduction Act.

VI. Submission to Congress and the General Accounting Office

The Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) provides, with limited exceptions, that no rule promulgated on or after March 29, 1996 may take effect until it is submitted to Congress and the Comptroller General along with specified supporting documentation. However, this requirement does not apply to ''any rule of particular applicability. . . .''. 5 U.S.C. 804(3). The present rule is of particular applicability, applying only to a particular waste at one facility under particular (and, as noted, exceptional) circumstances. Consequently, the Congressional review provisions of SBREFA are not applicable and the rule can take effect without submittal to Congress. (This is not to say that this rule will be immediately effective. As explained above in this preamble, the treatability variance will be valid for 24 months, commencing at the date the Surge Pond closure plan is approved by the Louisiana Department of Environmental Protection.)

APPENDIX 1.—SUMMARY OF SURGE POND WASTE CHARACTERIZATION DATA UNTREATED F 037 AND F 038

	1993 Feasibility Study		February 1994		Variance Petition, March 1994	
	Average	Range	Average	Range	Average	Range
VOLATILE ORGANICS						
Benzene	66.9	3.9–190	2.06	1.4–3.3	26.8	6.1–54
Ethylbenzene	135.0	32–00	15.6	12.8–18.1	37.4	28.6–57
Toluene	182.3	ND–490	15.0	12.2–19.9	56.1	7.0–126
Xylene	438.0	14–930	75.7	59.5–85.1	154	67–371
SEMIVOLATILE ORGANICS						
Anthracene	33.0	7–65	< 4.5	< 4.5	23.4	4.2–45
Benzo(a)anthracene	44.9	7.1–160	ND	ND	17.0	6.3–28
Benzo(a)pyrene	34.4	6–120	4.3	3.85–4.6	9.4	ND–22
Bis(2-ethylhexyl) phthalate	ND	ND	ND	ND	ND	ND
Chrysene	73.9	16–220	2.5	ND–4.2	29.4	9.3–47
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND
Naphthalene	280.0	75–490	63.5	60.2–69.2	103	36–148
Phenanthrene	308.3	71–550	74.8	70.4–80.5	123	50–192
Phenol	32.0	ND–46	ND	ND	ND	ND
Pyrene	94.2	18–200	< 3.8	< 3.8	42.7	13–67
INORGANICS						
Cyanide	NA	NA	<1	<1	10.1	<1–34
Chromium	1085.0	268–2330	< 0.05 TC	< 0.05 TC	3.1 TC	<0.05—9.7
Nickel	75.0	34.8–229	< 0.05 TC	< 0.05 TC	0.12 TC	0.06–0.19

APPENDIX 2.— SUMMARY OF PERFORMANCE DATA, CITGO TREATMENT SYSTEM

[Success treated avg = Average excluding data points which failed to meet 10 mg/kg Benzene baseline limit]

All concentrations in mg/kg except *mg/L TCLP	Day 1		Day 2		Day 3		Day 4		4 Day Average		Alt Std	UTS
	Pond Avg	Treated Avg [1]	Pond Avg	Treated Avg [2]	Pond Avg	Treated Avg	Pond Avg	Treated Avg	Pond Avg	Success Treated Avg		
Benzene	47.5	14.0	28.55	10.9	6.9	5.9	24.4	4.6	26.8	5.7	10	10
Ethylbenzene	42.75	32.85	33.1	26.4	32.05	29.5	41.5	19.2	37.4	24.5	39	10
Toluene	117	58.6	40.3	35.2	10.8	25.4	67.6	24.5	56.1	25.6	33	10
Xylene	174.75	160.75	121.8	97.7	110	127	212	110	154.4	119	150	30
Anthracene	30.35	15.3	25.1	21.5	9.0	12.0	29.0	9.9	23.4	11.9	20	3.4
Benzo(a)anthracene	17.1	11.35	18.2	17.1	13.3	13.6	19.5	14.9	17.0	14.2	19	3.4
Benzo(a)pyrene	0	0	12.7	11.5	8.5	8.9	16.4	7.1	9.4	8.3	19	3.4
Chrysene	32.2	18.8	33.9	27.1	18.3	22.8	33.0	20.65	29.4	22.1	29	3.4
Naphthalene	131.5	85.5	85.3	87.6	87.25	88.05	108.6	51.8	103.2	70.9	120	5.6
Phenanthrene	168	96.4	119.3	113	74.8	92.95	130.25	82.9	123.1	90.1	120	5.6
Pyrene	57.5	26.8	44.8	39.0	21.35	25.9	47.2	28.0	42.7	28.3	39	8.2
Cyanide	11.1	1.45	4.1	1.0	17.25	1.0	8.0	0.73	10.1	1.0	590	590
Chromium*	8.0	0.05	0.9	0.05	0.08	0.06	3.4	0.02	3.1	0.04	0.86	0.86
Nickel*	0.13	0.05	0.14	0.05	0.1	0.05	0.12	0.00	0.12	0.04	5.0	5.0

[1] All samples failed to meet 10 mg/kg limit for Benzene on Day 1, were omitted from standard calculation.
[2] 3 of 4 samples failed to meet 10 mg/kg limit for Benzene on Day 2, were omitted from standard calculation.

APPENDIX 3.—CALCULATION OF TREATMENT STANDARDS

	Ethylbenzene	Toluene	Xylene	Anthracene	Benz(a) anthracene	Benzo(a) pyrene	Chrysene	Naphthalene	Phenanthrene	Pyrene
Sample 2–2	25.7	31	122	19.5	13.8	11.0	25.1	84.6	107	38.7
Sample 3–1	29.6	24.2	117	14.3	14.0	12.5	26.2	50.2	103	28.3

APPENDIX 3.—CALCULATION OF TREATMENT STANDARDS—Continued

	Ethylbenzene	Toluene	Xylene	Anthracene	Benz(a) anthracene	Benzo(a) pyrene	Chrysene	Naphthalene	Phenanthrene	Pyrene
Sample 3–2	30.7	28.1	147	11.7	11.9	6.4	20.2	49.9	87.8	24.8
Sample 3–3	31.1	26.1	129	11.0	14.3	8.3	22.5	51.9	92.7	25.3
Sample 3–4	26.5	23.2	114	11.0	14.3	8.3	22.5	55.1	88.3	25.3
Sample 4–1	20.0	27.0	115	10.5	13.4	9.5	21.6	96.7	85.6	31.7
Sample 4–2	18.0	21.0	103	8.69	18.4	4.2	18.9	75.7	79.6	26.3
Sample 4–3	20.0	24.0	115	9.16	14.1	4.0	18.4	86.0	71.6	24.6
Sample 4–4	19.0	26.0	108	11.4	13.7	10.6	23.7	83.5	95.0	29.4
Mean	24.5	25.6	119	11.9	14.2	8.31	22.1	70.4	90.1	28.3
Var Factor	1.59	1.28	1.25	1.65	1.28	2.30	1.30	1.75	1.30	1.37
Treatment Standard	39	33	150	20	19	19	29	120	120	39

List of Subjects in 40 CFR Part 268

Environmental protection, Hazardous waste, Reporting and recordkeeping requirements.

Dated: October 22, 1996.

Michael Shapiro,

Director, Office of Solid Waste.

For the reasons set out in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as follows:

PART 268—LAND DISPOSAL RESTRICTIONS

1. The authority citation for part 268 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

2. Section 268.44 is amended by adding paragraph (p) to read as follows:

§ 268.44 Variance from a treatment standard.

* * * * *

(p) F037 and F038 wastes generated by the closure of the Surge Pond at the CITGO Petroleum Lake Charles Refinery site are excluded from the treatment standards under § 268.40 Table—Treatment Standards for Hazardous Wastes, and are subject to the following conditions:

(1) The hazardous constituents in the treated sludge (or in the TCLP extract of the treated sludge where indicated) must be at or below the concentration values indicated in the following table:

CITGO ALTERNATIVE LDR TREATMENT STANDARDS

Regulated Hazardous Constituent	CAS No.	Concentration in mg/kg unless noted as ''mg/l TCLP''
Anthracene	120–12–7	20
Benzene	71–43–2	10
Benz(a)anthracene	56–55–3	19
Benzo(a)pyrene	50–32–8	19
Chrysene	218–01–9	29
Ethylbenzene	100–41–4	39
Naphthalene	91–20–3	120
Phenanthrene	85–01–8	120
Pyrene	129–00–0	39
Toluene	108–88–3	33
Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330–20–7	150
Chromium (total)	7440–47–3	0.86 mg/l TCLP
Cyanides (total)	57–12–5	590
Nickel	7440–02–0	5.0 mg/l TCLP

Note: All standards for nonwastewaters are based on analysis of grab samples.

(2) The proposed sludge treatment system must be operated in accordance with applicable air emission standards specified by:

(i) 40 CFR Part 61—National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart FF: National Emission Standard for Benzene Waste Operations, § 61.348 Standards: Treatment Processes;

(ii) 40 CFR Parts 264 and 265—Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, Subpart CC—Air Emission Standards for Tanks, Surface Impoundments, and Containers (if applicable); and

(iii) Any additional requirements specified by the Louisiana Department of Environmental Quality (LDEQ).

(3) This treatability variance will be valid for a period of 24 months, commencing on the date the Surge Pond closure plan is approved by the State Director. CITGO may petition for additional time if unforeseen delays occur, provided they can demonstrate a good faith effort to complete the remediation.

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