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Restrictions First Third Rule

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☐ A — Signed by AA or DAA

☒ B — Signed by Office Director

☐ C — Review & Comment

**REFERENCE (other documents):**

Note to MARY ESCAVILLE and Regions I - X  
This Directive 9938.5 are only releasable in part.  
Only Sections 1,5,6 can be sent out to the public.  
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Agency

1. Directive Number

**OSWER Directive Initiation Request**

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3. Title

Enforcement Strategy Land Disposal Restrictions  
First Third Rule

4. Summary of Directive (include brief statement of purpose)

This directive presents guidelines to use in identifying the affected universe, targeting inspections, and reviewing soft hammer certifications and demonstrations submitted to EPA. the strategy is intended to assure that the most significant violations of the LDR program are addressed.

5. Keywords

INSpections, Land Disposal Restrictions, soft hammer, enforcement

6a. Does This Directive Supersede Previous Directive(s)?

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No

☐

Yes

What directive (number, title)

b. Does It Supplement Previous Directive(s)?

☒

No

☐

Yes

What directive (number, title)

7. Draft Level

☒

A - Signed by AA/DAA

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B - Signed by Office Director

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C - For Review &amp; Comment

☐

D - In Development

8. Document to be distributed to States by Headquarters?

☐

Yes

☒

No

This Request Meets OSWER Directives System Format Standards.

9. Signature of Lead Office Directives Coordinator

*Darlene Williams*

Date

1/3/89

10. Name and Title of Approving Official

Date

EPA Form 1315-17 (Rev. 5-87) Previous editions are obsolete.

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/E	DIRECTIVE	DIRECTIVE	DIRECTIVE

**ENFORCEMENT STRATEGY  
LAND DISPOSAL RESTRICTIONS  
FIRST THIRD RULE**

**Environmental Protection Agency  
Office of Waste Programs Enforcement**

**December 16, 1988**

**ENFORCEMENT CONFIDENTIAL**

**I. Introduction**

The Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA) enacted on November 8, 1984, included amendments requiring EPA to evaluate all hazardous wastes according to a strict schedule to determine whether land disposal of these wastes is protective of human health and the environment. EPA is setting levels or methods of treatment which substantially diminish the waste's toxicity or reduce the likelihood that the waste's hazardous constituents will migrate. Wastes that do not meet these treatment standards are prohibited from land disposal.

The following strategy is intended to assist the Regions and States in implementing the Land Disposal Restrictions (LDR) First Third Rule. This strategy primarily provides guidelines for Regions and States to use in identifying the affected universe, targeting inspections, and reviewing "soft hammer" certifications/demonstrations submitted to EPA. The strategy is also intended to assure that the most significant violations of the land disposal restrictions program are identified and that appropriate enforcement response is pursued.

Under HSWA, had EPA failed to promulgate treatment standards for solvent, dioxin, or California List wastes by the applicable statutory deadline, these wastes would have been prohibited from any land disposal. However, where the Agency has not promulgated treatment standards for First Third wastes, the statute allows land disposal of the wastes, provided that if the waste is land disposed in a landfill or surface impoundment, the following requirements are met:<sup>1</sup>

- (1) the unit in which the waste is placed must meet the minimum technological requirements (i.e. double liners, leachate collection systems, and ground water monitoring) or be exempt from such requirements pursuant to RCRA sections 3004(o)(2), 3005(j)(2) or (j)(4); and
- (2) the generator must certify to the Regional Administrator that he has made a good faith effort to locate and contract with treatment and recovery facilities practically available which provide the greatest environmental benefit.

These demonstrations and certifications should be submitted by the generator to the Region where the waste(s) is generated. In some cases the generator may forward the demonstration/certification to EPA Headquarters. Headquarters will in turn, forward the information to the Region where the generator is located. Each Region should review the certifications for

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<sup>1</sup> When such wastes are land disposed in units other than landfills and surface impoundments (e.g., waste piles, land treatment units), these requirements do not apply.

completeness and accuracy by evaluating the general Regional conditions and identifying actual treatment available. The Regional office where the specific generator is located has the responsibility for determining whether the information meets the regulatory soft hammer provisions. A national directory of commercial hazardous waste management facilities will be sent to all Regions to assist in these evaluations. Information acquired from "soft hammer" certifications/demonstrations received will be a continuing source of information on the actual availability of treatment in a Region.

Regions should consider developing a database on treatment available for particular industries and waste codes to supplement the national directory. Furthermore, sharing of such information among the Regions would be most beneficial. The Regions should also contact States and review State or biennial reports to further identify "soft hammer" treatment capacity available. A more detailed discussion on the "soft hammer" certification review process will be given in section III.

## II. Universe and Inspection Targeting

### 1. INSPECTION TARGETING

The First Third rule addresses a number of RCRA wastes which, for the large part, are associated with particular industry segments (the exception to this being the P and U wastes). In targeting facilities for inspection, it is important to consider a wide variety of factors which determine the responsibilities of the industry, and its probable response to the requirements of this rule. These considerations include, but are not limited to: the status of the industry (waste generator, treater, storage facility, or disposer), the capability for and availability of on-site storage, treatment and disposal of First Third wastes, and current industry waste management practices. In many cases, information necessary to characterize an industry may be available to the enforcement staff through a permit or Part B permit application. Additional information on industry characterization may be obtained if a RCRA Facility Assessment has been completed at the facility.

This inspection strategy resulted from consideration of each of the above-mentioned targeting considerations. The universe of affected facilities was identified, the characteristics of wastes were investigated (wastewater vs. nonwastewater), and the treatment technologies currently employed by the affected industries were reviewed.

The type of treatment technologies currently employed is of importance because, to the extent that existing treatment technologies will achieve compliance with Best Demonstrated Available Technologies (BDAT) standards, the facilities can be expected to continue their current practices, and likely pose a lesser compliance problem. Where technologies designated as BDAT are not currently in widespread use, and the treatment in place will not achieve treatment standards, industry will have to either make process changes, or change their treatment practices (onsite or offsite). Where

such changes (and possibly added expenses) are incurred, the possibility of compliance problems increase.

Table 1 lists the twelve industries primarily affected by the First Third rule. It may be seen from this table that the number of wastes regulated under each industry group varies from one to thirteen. However some of these wastes may be more ubiquitous than others. For example, bottom sediment sludges from the treatment of wastewaters from wood preserving processes using creosote and/or pentachlorophenol (K001) is common to the wood preserving industry. By comparison, a relatively small percentage of organic chemical plants generates distillation bottom tars from the production of phenol/acetone from cumene (K022). Realizing that these differences exist, the inspection strategy must be sensitive to the number of facilities within each regulated industry. On the other hand, large volumes of regulated wastes may be generated by a relatively few plants. Thus, both the size of the regulated community and the volume of wastes generated must be taken into consideration when developing and refining inspection priorities.

The BDAT standards for wastewater categories include the following treatment technologies: steam stripping, solvent extraction, chlorine oxidation, and stabilization. Solvent extraction and steam stripping are already employed by some industries for recycle/recovery purposes as the result of internal incentives, e.g., the recovery of process residues from the production of aniline (K103). These onsite technologies likely will continue. Also, facility treatment units are available for wastewater treatment. Many facilities may be conducting onsite treatment of First Third wastes without being subject to RCRA permitting requirements using boilers, furnaces, distillation units, waste-water treatment tanks, etc.. If the waste introduced into these "RCRA exempt" units is restricted, then any process residues also would be a restricted material based on the "derived from" rule. Furthermore, the facility treating a restricted waste in such units must comply with all LDR requirements (e.g. waste analysis, notifications, certifications) placed on a regulated treatment facility. Approximately 10 to 20 percent of the organic chemical plants are classified as Treatment, Storage and Disposal Facilities (TSDFs). The remainder of the facilities either send the waste off-site for disposal, manage the wastes on-site in RCRA exempt units, or claim that they are not managing hazardous wastes.

Other circumstances which may modify priorities include the characteristics of the industry and the regional distribution; for example, a high proportion of the petroleum industry facilities are TSDFs and they are located in significant numbers in certain Regions. These should be given priority over other generators.

The BDAT treatment standards for nonwastewaters are largely based on combustion technologies or stabilization. Most RCRA generators do not have RCRA permitted or interim status incinerators and stabilization capabilities. Therefore, the likelihood for offsite management of nonwastewaters appears greater than for wastewaters. Considering this fact, inspection activities should recognize the importance of inspecting

offsite commercial facilities managing nonwastewaters. Inspectors should also be aware of the potential for the use of onsite furnaces and "sham" energy recovery operations for illegal disposal of restricted wastes.

## 2. INSPECTION PRIORITIES

The general strategy is to conduct inspections in the order of priority stated below, recognizing that accommodations must be made for site specific conditions and circumstances. Inspectors should also consider giving priority to facilities that generate wastes subject to the F-solvents and/or California waste provisions of the land disposal ban, in addition to First Third wastes. Finally, inspection priorities should be sensitive to past compliance problems at the facilities, particularly with respect to land ban compliance.

### (a) Commercial Land Disposal Facilities

As with the earlier land ban inspection strategies, commercial land disposal facilities remain the highest priority. First Third wastes (i.e. "soft hammer" or wastes subject to a nationwide capacity variance or case-by-case extension) received by a landfill or surface impoundment must be managed in a unit in compliance with minimum technology requirements (MTRs) or that have received an applicable waiver from MTRs. The facility must maintain copies of all generator and treatment facility certifications including soft hammer certifications. Inspectors should assess the completeness of certifications and conduct follow-up inspections (of generators, storage facilities, and treaters) to ascertain compliance with the LDR regulations.

### (b) Non-commercial TSDFs

Many of the treatment technologies (including those capable of achieving the treatment standards) may be found at non-commercial TSDFs. Facilities which treat and dispose of their waste on site should be given great consideration when prioritizing inspections. Most importantly the inspector should determine the status of landfills and surface impoundments receiving soft hammer wastes with respect to the MTR. Inspectors may also consult other file documents, including Part B information, and RFAs to determine the presence of other treatment technologies available at the facility. These materials may also be useful in determining the physical/chemical characteristic of various wastes and the appropriate treatment standards based on these characteristics.

### (c) Commercial Treatment Facilities

Commercial treatment facilities may provide incineration, stabilization, and solvent recovery/distillation services, among other forms of treatment. Treatment facilities have a large degree of responsibility under the land disposal restrictions program. They should be inspected to determine whether wastes and waste residuals are receiving appropriate treatment prior to land disposal. In addition, inspectors should determine whether the facilities listed in the soft hammer

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**\*\*Table 1. AFFECTED INDUSTRIES BY  
WASTE CODE**

INDUSTRY	LISTING OF WASTE CODES	NO. CODES
Electroplaters	F006	1
Explosives	K044, K045, K046, K047	4
Ink Formulators	K086	1
Inorganic Chemicals	*K071, K073, K106	3
Iron & Steel	K061, K062, K087	3
Organic Chemicals	K015, K016, K018, K019 K020, K021, K022, K024 K025, K030, K083, K103, K104	13
Paint Manufacturing	K004, K008	2
Pesticides	K036, K037, K099	3
Petroleum Refining	K022, *K048, *K049, *K050, *K051, *K052, K087	7
Pharmaceuticals	K101, K102	2
Secondary Lead	K069, K100	2
Wood Preservers	K001	1

\* Indicates listed wastes which have received an extension from the effective date

\*\* Table does not include "soft hammer" waste



demonstrations are in fact conducting treatment as specified in the demonstration. The inspector should also review records, and conduct tests as necessary to ensure that the appropriate treatment standards are being applied (wastewater vs. nonwastewater).

(d) Generators

The vast majority of handlers affected by this rule are generators. Regions should compile lists of generators of First Third wastes and cross reference this listing with those known to generate F-solvent and California list wastes. In some cases wastes subject to soft hammers may also be subject to California List Halogenated Organic Compounds (HOC) standards. In these cases, the California List prohibition levels rather than the soft hammer provisions would apply to the waste. Table 2 presents a list of soft hammer wastes potentially subject to the California list HOC treatment standards. Other areas of concern include the appropriate identification of the wastes (e.g., F-solvent or K086 solvent wash sludge), appropriate identification of treatability group, and completion/maintenance of certification materials. Certain types of materials may pose special problems due to continuing controversy over waste code definitions, e.g., K051 API separator sludge from the petroleum industry, and K001 wood preserving sludges.

There are incentives for deliberately classifying wastes under the wrong waste code or treatability group. Two such incentives include differences between the wastewater and nonwastewater treatment standards, and the availability of management practices to provide the necessary treatment.

(e) Commercial Transfer Stations and Major Transporters

These facilities are responsible for maintaining the hazardous waste manifests and continuing the paper trail. In addition, if these facilities perform management of wastes by transferring the contents of hazardous waste containers and trucks into either bulk containers or other containers, the transporter or transfer station is responsible for generating a new manifest and establishing the treatment standards for the waste based on the generator's initial information. Information gathered from the inspection of these facilities may serve to set priorities for inspections of generators, treaters and disposers.

3. RESOURCES

It is intended that the land ban inspections be conducted in conjunction with Compliance Evaluation Inspections (CEIs) performed in accordance with the RIP. This will ensure a strong compliance monitoring presence while minimizing costs.

Sampling and analysis resources are limited, however Contract Laboratory Program (CLP) support is available should analyses be needed to support an enforcement action.

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Table 2

"Soft Hammer" Wastes Potentially Subject to the  
California List HOC Treatment Standard

K017	U029	U078
K021	U036	U129
K073	U037	U130
K085	U041	U158
P004	U043	U185
P016	U044	U192
P036	U046	U209
P037	U061	U210
P050	U066	U211
P058	U067	U227
P059	U074	U228
P123	U077	U237

## III. "Soft Hammer" Waste Provision

As discussed earlier, Regions should expect to receive "soft hammer" certifications from facilities generating "soft hammer" wastes destined for disposal in landfills or surface impoundments. Each region should consider resources and time available in prioritizing certification/demonstration reviews while also considering that only approximately 6% of the land disposed First Third wastes are actually "soft hammer" wastes. A further consideration in review selection should also be given to a handler who may be shipping a significant volume of "soft hammer" waste to another Region. In this situation, both Regions should coordinate in verifying the validity of the certification/demonstration submitted. A recommended approach would be to selectively review specific facilities of concern. For instance, facilities with a historically bad compliance record should be a high priority for certification review. Some other facilities which should be considered for review are generators which are also on-site disposal facilities and large commercial treatment facilities which generate "soft hammer" residuals.

There are varying conditions in a certification/ demonstration review to consider which could potentially invalidate a facility's "soft hammer" certification. It should be emphasized that section 268.8 clearly specifies that the generator must make "a good faith effort to locate and contract with treatment and recovery facilities practically available which provide the greatest environmental benefit." The treatment hierarchy in the August 17, 1988 rule states that recycling/recovery is the method achieving the greatest environmental benefit followed by destruction and stabilization technologies. Therefore, the objective in the generators search for adequate treatment should be to look for treatment which indeed provides the "greatest environmental benefit" and not just any treatment at random. The information that the Regions should utilize in evaluating the soft hammer certification/demonstration are the following:

1. The generator has made no effort to contact and locate alternative treatment. This certification should clearly be invalidated.
2. A certification/demonstration which claims no treatment available, but the information submitted on facilities contacted does not show any attempt to contact treatment facilities recommended or listed in the preferred treatment hierarchy ("which provide the greatest environmental benefit") in the preamble. The Region could invalidate this facility's certification on grounds that at a minimum the certifier should have contacted those facilities potentially available to him with treatment as listed in the hierarchy and documented whether or not treatment was available to him. Again, the Region may either invalidate the certification or require further information from the certifier prior to making any determination.
3. The third situation that may occur would be when the facility certifies to the use of treatment technology not listed in the "Appropriate Treatment Technology" Hierarchy. For example, a facility generating a K035 sludge (nonwastewater) certifies that

steam stripping is the best technology available. The hierarchy does not list steam stripping as an appropriate treatment technology to use for this waste. Assuming no economic burden or other impracticality is claimed, the Region should first (either directly or through the generator certification) ascertain whether other treatment technologies (i.e., incineration, wet air oxidation, biodegradation, ash stabilization) are actually available. If other treatment is available which provides a greater environmental benefit, a determination must then be made as to whether this treatment should be required. These situations must be evaluated on a case-specific basis considering the type and volume of waste and the environmental benefit of requiring an alternative treatment technology.

If a certification is invalidated, the generator must cease disposal of the waste and immediately notify the receiving facility (if the waste has been sent offsite) of his status. The Region should confirm this with the receiving facility.

The regulation allows for a generator to demonstrate that treatment of "soft hammer" waste is not a "practical" alternative to land disposal or that it poses an economic burden, which takes into consideration the increase in cost of transport, treatment, and disposal in an MTR unit. A cost ratio is given in the preamble which can be applied to the generator's specific conditions in order to determine whether treatment is or is not "practical". The cost ratio is determined by dividing the costs of treatment, shipment and disposal by costs of shipment and disposal only. In general, if the ratio is greater than 2.0, treatment would not be practical. Likewise, if the ratio is less than 1.5, treatment generally would be considered practical. If the ratio is between 1.5 and 2.0, EPA will generally consider treatment to be "practical" unless the certifier can demonstrate why his cost should be considered not "practical". The cost ratio and consideration of "practical" is only a basic reference tool, and not a hard and fast rule.

In any case, a demonstration by either EPA or the certifier can be made showing that a specific practice is or is not "practical", regardless of the cost ratio. For instance, the example given in the preamble where Generator A has an on-site MTR unit, while Generator B (across the street from Generator A) must ship his "soft hammer" waste out of state to a commercial disposal facility, would illustrate consideration other than the cost ratio. The costs of shipment and disposal for Generator A would be negligible, and thus, almost any cost of treatment would be considered to be not practical, given the ratio. In such cases the Region should evaluate Generator A's certification and demonstration of practically available treatment technologies by methods other than the given cost ratio. These situations must be evaluated on a case-by-case basis considering the Region's knowledge of available technologies and relative financial status or size of the facility. Furthermore, the cost ratio may not be used to discontinue current treatment practices (although certain practices may no longer be allowed).

## IV. Enforcement

In complying with the First Third Regulation and other LDR regulations, it is essential for a waste to be properly characterized, in particular, whether or not it is in the proper waste treatability group (wastewater or nonwastewater). Wastewater treatment residuals, leachate, and contaminated ground water derived from "soft hammer" wastes currently are not prohibited from land disposal. Therefore, the incentive exists for a "soft hammer" liquid waste to be classified as a "soft hammer" wastewater. Furthermore, a unit which receives "soft hammer" liquid wastes would have to meet the minimum technological requirements (MTR) or have a 3005(j)(2), (j)(4), or 3004(o)(2) waiver. A unit with a 3005(j)(3) or (j)(13) waiver from the MTR is not eligible to receive restricted wastes, unless a demonstration has been made under 3004(o)(2). This demonstration states that two liners and a leachate collection system are not required if "the Administrator finds for a landfill or surface impoundment, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as such liners and leachate collection systems". One treatability group may be less stringent than the other for a specific waste (i.e. wastewater vs. nonwastewater), possibly requiring less or no treatment for that waste.

Wastewater residues from treatment of soft hammer wastes can be disposed of in a landfill or surface impoundment based on the rescheduling of these wastes to the Third Third [(Section 268.12(b)]. However, these residues must clearly meet the criteria of less than 1% Total Organic Carbon (TOC) and less than 1% Total Suspended Solids (TSS). In addition, these residues must result from the following list of well designed and well operated treatment technologies that are listed in Section 268.12(b): metals recovery, metals precipitation, cyanide destruction, carbon adsorption, chemical oxidation, steam stripping, biodegradation, and incineration or other direct thermal destruction. The wastewater residues from soft hammer wastes are to be included in the Third Third of scheduled wastes for which EPA is to develop treatment standards. The enforcement official should request analytical data from a facility in order to substantiate a wastewater determination. Where such data is unavailable and the wastewater determination is highly questionable, the enforcement official should request additional sampling and analysis to be performed by the facility or EPA should perform its own sampling to ascertain the waste treatability group. In any case, the burden-of-proof should be placed on the facility making the claim.

States are expected to do inspections based on their agreement commitments. The success of this enforcement strategy will depend greatly on coordination between State and EPA to insure that violations appropriately identified by the States are adequately referred to EPA for enforcement. Enforcement should reflect what is outlined in the Enforcement Response Policy (ERP) [OSWER Policy Directive 9900.0-1A] which stresses the importance of concentrating enforcement efforts on the most serious violators and taking timely and aggressive enforcement action against these violators. There are a number of violations cited in the ERP

which must be given high enforcement priority by the Regions and States. These include:

- o Improper disposal of waste in violation of the LDR restrictions. In the RCRA Enforcement Response Policy, effective 10/1/88, land disposal facilities that improperly dispose of wastes in violation of the land disposal restrictions are characterized as a high priority violator (HPV), depending upon the potential environmental impact.
- o Mixing, solidifying, or otherwise diluting waste to circumvent the LDR regulations. Dilution of wastes to meet the treatment standards is specifically prohibited by Section 268.3 and any handler identified as performing dilution to circumvent the land disposal restrictions should be classified as a high priority violator.
- o Incorrectly certifying a waste for disposal/treatment in violation of the LDR regulations. Facilities that incorrectly certify a restricted waste for disposal should be classified a high priority violator, depending upon the potential environmental impact.
- o Failure to submit notifications/certifications as required by the LDR regulations. Facilities that fail to submit the required notification or certification for the restricted waste with each manifest are classified as high priority violators, depending upon the potential environmental impact.
- o Deficient waste determination by the generator, treatment facility or land disposal facility. This violation constitutes a Class I violation, and could constitute a high priority violation, depending upon the potential environmental impact.

Due to the LDR schedule listed in Section 268 of 40 CFR Parts 190-399, additional requirements for facilities may be promulgated as part of the LDR framework. Future LDR enforcement strategies will describe and classify violations of these requirements for the Regions and States.

The National Enforcement Investigation Center (NEIC) is a useful resource which is available to all Regions. NEIC assistance may be used to develop judicial cases or determine LDR compliance status of large complex facilities of special concern to a Region. EPA Headquarters Enforcement staff are also available to render assistance for case development or any LDR related inspections.

## V. Communications

EPA Headquarters is presently developing and updating several documents to assist EPA and State personnel in implementing and enforcing this regulation. A revised inspection manual for First Third wastes is being developed. This manual will include a regulatory overview, list handler requirements, examine the "soft hammer" provision and its implications, and discuss the major enforcement concerns with the regulation. Along with the First Third inspection manual, a single inspection checklist compiling all LDR requirements through the First Third rule will be developed. Also, an up to date version of the 40 CFR regulations containing all requirements since November 7, 1986 and including all amendments through the First Thirds rule will be developed and distributed. Finally, to assist the regulated community in better understanding and complying with all the LDR Regulations, an information booklet containing a summary of all LDR requirements will be distributed to them through a mass mailing.

LDR conference calls will also be held on a quarterly basis. The calls will involve Headquarters and Regional LDR contacts and will serve as an opportunity to discuss any problems encountered, share ideas or recommendations, and update on the latest LDR developments.

## VI. Data Management

On May 1988, OWPE conducted a preliminary analysis of Regional LDR Enforcement Activity. That analysis showed a substantial variation among Regions in the detection and classification of LDR violations. A guidance document for LDR violations classification will be developed by a Regional workgroup to assist the Regions in proper classification and enforcement response and ultimately result in more uniformity nationwide. In order to fully assess Regional implementation of LDR and to determine the need for further guidance development and/or training, a Regional LDR Enforcement Activity update will be implemented on a quarterly basis beginning November 6, 1988. This information will be logged, tracked and evaluated by EPA Headquarters.