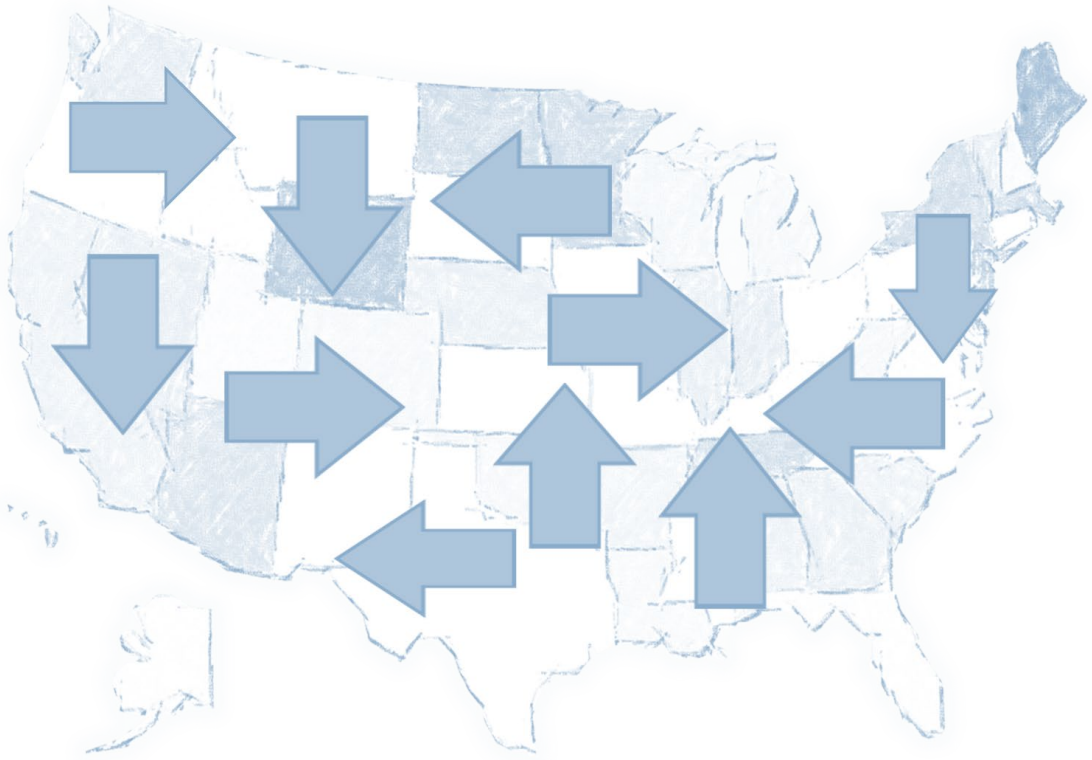
National Capacity Assessment Report
Pursuant to CERCLA Section 104(c)(9)



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Acronyms Used in this Report

BIFs	Boilers and Industrial Furnaces (40 CFR Part 266, Subpart H)
BR	Biennial Report or Hazardous Waste Report (40 CFR 262.40(b) and (d); 40 CFR 262.41; 40 CFR 264.75; 40 CFR 265.75; and 40 CFR 270.30(l)(9))
BTU	British Thermal Unit
CA	Cooperative Agreement
CAP	Capacity Assurance Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. § 9601 et seq.)
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
EPA ID	EPA Identification Number
FR	*Federal Register*
GM Form	Waste Generation and Management Form
LQG	Large Quantity Generator (40 CFR 262.17)
PFAS	Per- and polyfluoroalkyl substances
RCRA	Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. §6901 et seq.)
SARA	Superfund Amendments and Reauthorization Act of 1986
SQG	Small Quantity Generator (40 CFR 262.16)
SSC	State Superfund Contract
TSDFs	Treatment, Storage, and Disposal Facilities (40 CFR Part 264 and 40 CFR Part 265)
VSQG	Very Small Quantity Generator (40 CFR 262.14)
WR Form	Waste Received from Offsite Form

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Executive Summary

The need for capacity assurance is driven by Section 104(c)(9) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or Superfund law. The provision, enacted in the 1986 Superfund Amendments and Reauthorization Act (SARA), requires that, prior to the U.S. Environmental Protection Agency (EPA or the agency) providing funding for any remedial actions, a state must assure the availability of hazardous waste management capacity. The provision specifically requires that states assure the availability of hazardous waste treatment or disposal facilities that have adequate capacity to manage the hazardous waste expected to be generated within the state during the 20-year period following the date when they enter into a Superfund State contract (SSC) or remedial response Cooperative Agreement (CA). The Congressional intent of this requirement is to assure that hazardous waste management capacity is available to avoid improper disposal and waste management issues.

To help states fulfill this statutory requirement, a planning process was developed in 1993 by a workgroup comprised of state, EPA, regulated industry, and environmental representatives. The planning process begins with the EPA collecting data on waste treatment and disposal capacity, and the demand for this capacity nationwide. The EPA refers to the Hazardous Waste Report (also known as the Biennial Report or BR), permit data in the RCRAInfo data system[1], hazardous waste export data, manifest data, and Internet research results. The EPA also communicates directly with a limited number of the hazardous waste management facilities being examined to verify and supplement its data and estimates. The EPA then compares the national hazardous waste treatment and disposal capacity to the demand for this capacity. The EPA examines hazardous wastes managed onsite and hazardous wastes shipped offsite for management at facilities under the same ownership (captive) and at commercial hazardous waste management facilities that are available to all generators.

The agency's 2024 assessment focuses on the nation's capacity for energy recovery, incineration, and landfilling at commercial facilities because such facilities are often costly, difficult to permit, and are essential for managing much of the nation's hazardous waste. In recent years, several companies have chosen to shut down onsite and captive waste management operations, so the commercial hazardous waste management industry is integral to many manufacturing and service sectors that rely on the ability of the commercial hazardous waste management sector to properly treat and dispose of wastes generated when producing products and providing important services here in the U.S. The 2024 assessment indicates that there exists the availability of adequate capacity nationwide for the destruction, treatment, or secure disposition of all hazardous wastes reasonably expected to be generated through December 31, 2049. Based on this conclusion, any state entering into a State Superfund Contract or remedial response Cooperative Agreement between January 1, 2025, and December 31, 2029, may provide assurance of adequate hazardous waste treatment or disposal capacity for the 20 years following the contract/agreement date, as specified under CERCLA 104(c)(9).

Going forward, incineration and landfill categories may have limited capacity as facility operations and demands change over time. Moreover, the COVID-19 pandemic revealed some vulnerabilities in the nation's hazardous waste management system. Specifically, generators had some issues shipping wastes to incineration facilities due to issues such as a trucking shortage, labor shortages, and supply chain disruptions of incinerator equipment replacement parts. Therefore, states are

[1] RCRAInfo is a national database used by the EPA to track entities regulated under Subtitle C of RCRA.

encouraged to engage in efforts to minimize hazardous wastes that will be managed via incineration or landfills by working with generators to reduce the generation of waste or find alternative management options. States are also encouraged to seek ways to develop new incineration and landfill capacity for the future. The shortage in the incineration category seems to be affecting primarily containerized wastes so finding solutions for these wastes should be a priority when feasible. The EPA is aware of onsite and captive units that have closed in recent years and expects this trend to continue as these units age and companies make decisions not to invest in new equipment but shift the waste demands to the commercial hazardous waste management sector. Moreover, economic trends and increases in manufacturing may increase hazardous waste generation and the demand for more management capacity.

The time period for the capacity assessment goes well beyond the normal permitting periods, which are typically five to 10 years. The uncertainties of the permitting and permit renewal processes are inherent in any long-term projected needs for capacity. Because states typically permit the treatment and disposal facilities and are also required to provide the CERCLA assurance to the EPA, it is critical that states be engaged in the ongoing analysis of national capacity. The EPA also believes that involvement by all stakeholders, including the public and the waste generation and management sectors, at both the national and state level is important regarding issues related to hazardous waste management practices and the development of hazardous waste management programs. For these reasons, the EPA has provided the 2024 national capacity assessment, the analytical methodology, and data used in the analysis on the EPA's Capacity Assurance Planning web page to solicit comments for consideration in future capacity assessments. Documents used as the basis for the national capacity assessment are also posted on the web page.

1. Introduction

Background

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or Superfund law, was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986. These amendments include the provisions under Section 104(c)(9) that require states to assure the availability of hazardous waste treatment or disposal facilities that have adequate capacity to manage the hazardous waste reasonably expected to be generated within the state over 20 years prior to the President providing funding for any remedial actions. The President delegated the authority to determine adequacy to the EPA Administrator. The capacity assurance requirement took effect three years after the enactment of SARA and must be provided in any Superfund State Contract (SSC) or remedial response Cooperative Agreement (CA) entered into between the state and the EPA. Therefore, after October 17, 1989, no new Superfund remedial actions have been funded using federal remedial action resources without a state first entering into an agreement providing an assurance of capacity deemed adequate by the EPA.

CERCLA Section 104(c)(9)

(9) Siting. Effective 3 years after the enactment of the Superfund Amendments and Reauthorization Act of 1986, the President shall not provide any remedial actions pursuant to this section unless the State in which the release occurs first enters into a contract or cooperative agreement with the President providing assurances deemed adequate by the President that the State will assure the availability of hazardous waste treatment or disposal facilities which –

(A) have adequate capacity for the destruction, treatment, or secure disposition of all hazardous wastes that are reasonably expected to be generated within the State during the 20-year period following the date of such contract or cooperative agreement and to be disposed of, treated, or destroyed,

(B) are within the State or outside the State in accordance with an interstate agreement or regional agreement or authority,

(C) are acceptable to the President, and

(D) are in compliance with the requirements of Subtitle C of the Solid Waste Disposal Act

Under the program that the EPA implemented in 1989, states submitted Capacity Assurance Plans (CAPs) to the agency as the basis of their assurance. Through these CAPs, each state had to demonstrate that it had enough in-state capacity or agreements with other states to share capacity for 20 years. Because of concerns raised by the states over the 1989 capacity assurance planning process (refer to *Hazardous Waste Management in the States: A Review of the Capacity Assurance Process*, 1992) and several court decisions, the agency worked closely with the states to develop a planning process that would first focus on an assessment of national capacity. The assessment of national capacity is intended to better reflect the reality of waste flows and needs for future management capacity.

The EPA finalized the national capacity planning process in 1993 and documented the approach in guidance (refer to *Guidance for Capacity Assurance Planning*, May 1993; hereafter referred to as the 1993 Guidance). The 1993 Guidance presents a phased approach for states to assure the future availability of hazardous waste treatment and disposal capacity. The initial phase of the planning process involves developing data to determine the demand for commercial management, and commercial capacity available nationwide. If capacity is projected to exist after assessing the 20-year demand for capacity, then all states have met the assurance requirement. If shortages are predicted nationwide, states that have a demand exceeding their supply of capacity in a shortfall management category are expected to address the shortages through waste minimization efforts in Phase 2 and capacity development in Phase 3 of the national planning process.

After the 1993 Guidance was issued, states had one year to prepare the CAP data submissions needed for the first phase of the national planning process. The data submissions demonstrated the state's knowledge of its existing hazardous waste management systems, provided the projections of the state's process or "recurrent" waste demand for commercial management, and provided the commercial management capacity available within the state. This data submission also included information about the state's waste minimization program so the state could justify a 10 percent reduction in projected demand. The data submission did not include projected demand from cleanup or "one-time" waste due to complexity and consistency issues. In January 1995, the EPA published the *One-time Waste Estimates for Capacity Assurance Planning* document. This document provided estimates for Superfund remedial actions, Superfund removal actions, Resource Conservation and Recovery Act (RCRA) corrective actions, underground storage tank cleanups, along with state and private cleanups.

Once the EPA regions reviewed the data submitted by the states for consistency and accuracy, the EPA Headquarters then calculated the total national demand on commercial management by aggregating the states' projected demand and projected commercial capacity through the year 2013. The first national assessment was finalized in November 1996, which was over three and a half years after states initiated the planning process by developing their data. The results of this undertaking are presented in a document titled *National Capacity Assessment Report: Capacity Planning Pursuant to CERCLA Section 104(c)(9)*, November 1996.

When the final assessment was published in the *Federal Register* (62 *FR* 2156, January 15, 1997), the EPA stated that it would periodically evaluate hazardous waste generation and management information. The primary source of these evaluations has been the Hazardous Waste Report (also known as the Biennial Report or BR). The BR must be completed by large quantity generators (LQGs)[2] and treatment, storage, and disposal facilities (TSDFs)[3] every two years. The types of information requested in the BR on hazardous waste include the quantity, nature, disposition, and the efforts taken to reduce the volume and toxicity of hazardous waste. In addition to reviewing the BR data, the EPA has conducted a variety of analyses that have examined hazardous waste generation and management throughout the years to support rulemaking activities. The BR data and

[2] An LQG is a facility that generates 1,000 kilograms (2,200 pounds) or more of hazardous waste in any single calendar month, or more than 1 kilogram (2.2 pounds) of acute hazardous waste in any single calendar month, or more than 100 kilograms (220 pounds) of acute hazardous waste spill clean-up material in any single calendar month.

[3] A TSDF is any facility that treats, stores, or disposes of RCRA hazardous waste, regardless of the quantity managed. The term "TSDF" does not include facilities that generate and accumulate hazardous wastes onsite for a limited amount of time without a TSDF permit. The amount of time that hazardous wastes can be stored onsite without a TSDF permit varies depending upon the facility's hazardous waste generator status. For example, LQGs may store their hazardous wastes onsite for no more than 90 days [40 CFR 262.17(a)].

the rulemaking analyses have not indicated any drastic changes in management behavior that could affect the future availability of hazardous waste management capacity.

To gather more information about current and projected management behavior, the EPA made the decision in 2014 and in 2019 to reassess the national capacity situation using the 1993 Guidance.[4, 5] The most recent national assessment (i.e., the 2019 national assessment) indicated that adequate national capacity for the treatment and disposal of hazardous waste existed through the year 2044. Because there is the potential for unforeseen circumstances that could affect the future availability of management capacity (e.g., new federal regulations, permit denials, changing market conditions), the EPA is once again reassessing the national capacity situation.

Purpose and Organization of Report

This Report describes the data, analyses and conclusions needed for the capacity assurance. The Report focuses on the national capacity for energy recovery, incineration, and landfilling at commercial facilities because such facilities are often costly, difficult to permit, and are essential for managing much of the nation's hazardous waste. In recent years, several companies have chosen to shut down onsite and captive waste management operations, so the commercial hazardous waste management industry is integral to many manufacturing and service sectors which rely on the ability of the commercial hazardous waste management sector to properly treat and dispose of wastes generated when producing products and providing important services here in the U.S.

The remainder of this Report is organized into the following sections:

- Section 2 – Data Development discusses the development and modification of data used in estimating the demand for and available capacity of treatment and disposal facilities in this current 2024 national capacity assessment.
- Section 3 – Methodology Issues describes some issues related to the assessment's methodology and how they were resolved.
- Section 4 – Discussion of the National Capacity Assessment presents the national, aggregated data used to estimate the national demand and capacity.
- Section 5 – Conclusions presents the EPA's conclusions about the availability of national capacity.
- Section 6 – References lists the reference sources used in preparing the assessment.

Refer to Appendices A through F for supplemental information on the agency's assessment.

[4] For the 2014 national capacity assessment, refer to https://www.epa.gov/sites/production/files/2016-01/documents/nationl_capacity_assessmnt_032515.pdf.

[5] For the 2019 national capacity assessment, refer to https://www.epa.gov/sites/default/files/2019-12/documents/final_2019_capacity_assessment_report_20191217v1.pdf.

2. Data Development

To develop the data to assess hazardous waste management demand and capacity at a national level, the EPA referred to the 1993 Guidance as an initial step. This guidance provides instructions for developing six data tables using BR as the primary source of data. The data tables include demand for onsite management units, demand for captive management units (management units at facilities under the same ownership) along with the demand and capacity for commercial management units. These demand data are compiled into 12 CAP management categories.[6] The 1993 Guidance also outlines issues to consider and the methods to project the future availability of capacity for different waste management categories. The projection tables are focused entirely on future demand for commercial management capacity. The commercial management category is where shortfalls could be projected because waste managed onsite and waste shipped offsite for management at facilities under the same ownership (captive) could be shifted to commercial management if temporarily closed or shut down. The methodology for commercial management also addresses any projected shortfalls in the metals, organics, and inorganics recovery categories by reallocating shortage quantities to destruction and disposal CAP management categories in accordance with the EPA's management hierarchy. Therefore, the EPA conducted detailed data gathering efforts targeted on commercial energy recovery units (i.e., boilers and industrial furnaces), incinerators, and landfills. See the Discussion of National Aggregated Data by the EPA section of this report for data on commercial energy recovery, incinerators, and landfills.

The 2024 assessment, like the 2019 and 2014 assessments, involved some slight modifications to the approach used in 1993 when states submitted the six data tables to the EPA for aggregation and assessment of future capacity. The 1993 Guidance was developed based on the criterion that states lacked access to a data system that included consistent information for all facilities in the nation and to software capable of handling complex data manipulations for large volumes of information. Thirty years ago, most states only had access to hazardous waste generation and management data for their individual state. Often, both the hardware and software for the old data systems were unreliable, causing some states to use manual manipulation of their data to produce the six tables for their CAP data submission. Today, states have access to the EPA's RCRAInfo system, a national data system used to track entities regulated under Subtitle C of RCRA (i.e., hazardous waste handlers).[7]

The following paragraphs provide an overview of the BR and the data development process used in the 2024 assessment. Appendix D describes the technical computing aspects of the modified methodology used to develop the data tables necessary for conducting the national assessment. For more detailed information about the general CAP process, see the 1993 Guidance and the National Assessment Reports finalized in November 1996, December 2014, and December 2019.

Biennial Report Overview

The primary source of data used in conducting the national capacity assessment is the BR. The BR contains data reported by a hazardous waste handler and under federal law (RCRA Sections 3002 and 3004) must be submitted by LQGs and TSDFs every two years. It consists of several forms, including: the Waste Generation and Management (GM) Form and the Waste Received from Offsite (WR) Form. The GM Form must be filed by generators (i.e., LQGs) to report hazardous waste

[6] See Appendix C for examples of the various types of management technologies for each category.
[7] RCRAInfo includes data on general handler information, waste generation and management, permit or closure status, financial assurance, compliance with federal and state regulations, and cleanup activities.

generation and management activities during the reporting year. The WR Form must be filed by off-site waste handlers (i.e., TSDFs) to report hazardous wastes received from other hazardous waste sites and the method(s) used to manage them on their sites during the reporting year. States authorized to implement the RCRA program can be more stringent and broader in scope with their state reporting requirements. Taken together, these forms provide the following information:

- Facility information (e.g., EPA ID number, name, location, industry sector);
- Waste characterization (e.g., type of process/activity generating the waste, waste form, hazardous waste code(s) representing the waste);
- Management method(s) (e.g., metals recovery, incineration); and
- Quantity of hazardous waste generated and/or managed.

To report some of the above information, the BR instructions provide a coding structure that waste handlers must use. For example, the BR instructions require the use of management method codes to describe the type of hazardous waste management system used to treat or dispose of a hazardous waste. The management method codes reported in the BR forms are key to conducting the national capacity assessment because they are the basis for allocating wastes into the various CAP management categories.

It is important to mention that each BR data collection cycle includes a rigorous data quality process implemented by states before they submit any data to the EPA. Because the analyses rely on the shipment and management data, the EPA and the states then conduct additional data quality checks on the national BR data set to ensure readiness for the capacity analyses. For example, for the 2021 BR data, the EPA and the states conducted additional quality checks on the waste shipment data for potential errors such as: (1) typographical errors in the EPA Identification Numbers (EPA IDs), to help ensure the destination facilities are correct; (2) differences in management method codes between the shipment and receiving facilities, to help ensure the correct management method is assigned to the quantities generated; and (3) differences in shipment quantities between the shipping and receiving facilities, to help ensure the correct quantities are used in the analyses. See Appendix F for more on the enhanced data quality effort for the 2021 BR data.

Baseyear Data

In developing demand data for the national assessment, the EPA first defines the "baseyear" demand data. For the 2024 assessment, the year 2021 is the "baseyear" for the demand data because, at the time the analysis was conducted, this was the most recent year for which BR data were available. The EPA used the 2021 BR data to estimate the quantity of hazardous waste management by the following categories:

- **Onsite management.** This includes waste managed in units at the facility generating the waste, which are permitted as not accepting waste from offsite.
- **Captive management.** This includes waste shipped offsite for management at facilities owned by the same company as the generator but located at a different site.

- **Commercial management.** This includes wastes shipped by generators to unaffiliated management facilities through private contracts or agreements. The EPA considered all demand for management in units permitted as "accepting waste from offsite" as commercial, including demand reported as onsite management by the commercial management facilities. This assignment is reasonable because wastes managed onsite by commercial facilities reduce the capacity that is commercially available at the facilities. For example, if a commercial landfill facility disposes of its own onsite wastes at the landfill, the amount of landfill capacity used for that waste will not be available for facilities that send their waste for disposal at the commercial landfill.

The 2021 baseyear waste quantities for onsite, captive, and commercial management are compiled into 12 CAP management categories and represent the baseyear amount of "demand" for each of the 12 CAP management categories.

The most recent capacity information was gathered in 2024 and thus, 2023 is considered the baseyear for the capacity data. To gather information on available commercial hazardous waste management capacity, the EPA used several sources, including RCRAInfo's Permit Module; limited consultations with commercial hazardous waste management facilities; and other data sources, such as the results of Internet research. Appendix A to this Report presents commercial capacity data used in the analysis. Appendix B presents a list of commercial hazardous waste management facilities (as well as a list of onsite and captive hazardous waste management facilities) and descriptions for the BR management codes captured by each CAP management category. See Appendix C for examples of the various types of management technologies for each category.

In analyzing the demand for commercial hazardous waste management, an important analytical quality consideration was to evaluate the BR data for any double counting of waste demand. To do this, the EPA first removed foreign export and import waste quantities from the baseyear BR data to avoid the potential of double counting of additional waste demands. Data on foreign exports and imports are incorporated separately in the last step of the assessment. (For additional information on this step, refer to Demand from Foreign Exports and Imports in the "Methodology Issues" section of this report.)

The baseyear data is meant to represent hazardous waste and generators regulated by the RCRA federal program. Demand from state programs that are broader in scope and more stringent than the federal program are added into the assessment in the final step of the analyses. To identify wastes considered to meet the federal regulatory definition of hazardous[8], the EPA relied on indicators or flags that implementers (i.e., states and the EPA regions) set when they upload the BR data into RCRAInfo. These "Yes" or "No" flags are referred to as "Include in National Report" flags. The purpose of the "Include in National Report" flags is to be able to identify RCRA federally-defined hazardous wastes reported by sites that are federal LQGs or TSDFs. The use of the flags is important because states may store federally required data as well as state-only data in the RCRAInfo system. Thus, the "Include in National Report" flags provide a way to differentiate the RCRA federally-defined hazardous wastes from state regulatory-defined wastes (i.e., wastes from requirements that are more stringent or broader in scope than federal requirements). These steps were also necessary to avoid double counting of waste demand because waste demand from both wastes not defined as hazardous wastes under the federal RCRA program and waste generated

[8] To be considered a hazardous waste, a material first must be classified as a solid waste (40 CFR 261.2). If a waste is considered solid waste, it must then be determined if it is hazardous waste (40 CFR 262.11). Wastes are defined as hazardous by EPA if they are specifically named on one of four lists of hazardous wastes located in 40 CFR Part 261, Subpart D (F, K, P, U) or if they exhibit one of four characteristics located in 40 CFR Part 261, Subpart C (characteristic wastes).

by generators not federally defined as *LQGs* are incorporated in the last steps of the capacity assessment. **See Exhibit 1 for an overview of baseyear data development using the BR data.**

Baseline Data

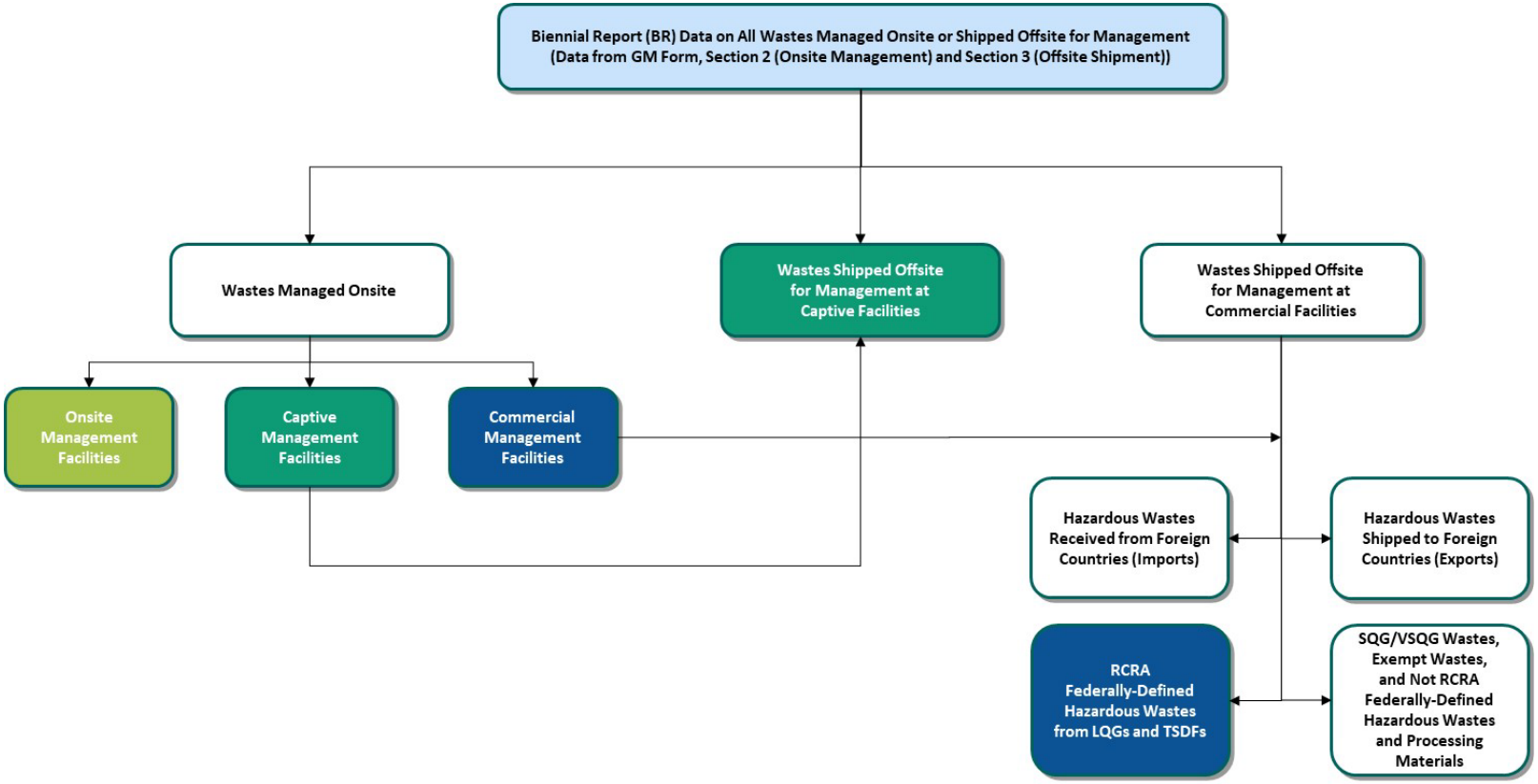
After compiling the baseyear demand data into the CAP management categories for Tables I through Table III, the EPA adjusted demand represented by the 2021 BR data to the current year of 2024. This adjusted set of data is referred to as "baseline data," and was used as the starting point for projecting future annual demand for commercial management. Baseline and projected demand estimates represent the demand for management capacity for the entire year.

For the 2024 baseline demand data for commercial management, the EPA separated process waste demand from cleanup waste demand because the Guidance discusses that these different sources of waste generation should consider different factors when determining projected waste demand quantities. For example, process wastes are typically generated on a continual, recurring basis while cleanup wastes can be a one-time event so generation can fluctuate over time. To address this issue, the EPA averaged two report cycles of BR data to derive the cleanup waste estimates for the 2024 baseline demand. The process and cleanup waste distinction is also important if there is ever a need to address future capacity shortages in Phase 2 as process wastes are typically more amenable to targeted waste reduction and waste minimization efforts.

In 1993, states were asked to incorporate the effect of new regulations (e.g., BIF rulemaking, Land Disposal Restrictions, Hazardous Waste Listings, expiration of treatment variances) on management behavior when adjusting from baseyear to the baseline and projecting into future years. However, because the RCRA program is a more stable regulatory program than it was 30 years ago, no adjustments for new regulations from the 2021 baseyear data were made to the 2024 baseline. Any new guidance, rules, or policies that have been finalized and affect management behavior are assumed to be reflected in the baseyear data. Historically, the EPA and states have only incorporated the expected impact of final rulemakings, permit decisions, Superfund remedy selections, etc., to avoid the appearance of overriding the public participation process.

To estimate 2024 baseline capacity, the EPA obtained available, permitted capacity data directly from commercial energy recovery, incineration, and landfill facilities operating nationwide in 2024. The EPA also verified information in RCRAInfo concerning the status of RCRA permits and the management of RCRA federally-defined hazardous wastes. These facilities also provided information about not RCRA federally-defined hazardous wastes and processing materials managed in their commercial units. Baseline demand estimates represent the demand for management capacity for an entire year. For purposes of this analysis, baseline capacity for landfills is the quantity estimated to be available at the end of the entire calendar year for 2023 (i.e., on December 31, 2023).

Exhibit 1
Baseyear Demand Data Development Using the Biennial Report Data



Legend

- Biennial Report Data from the Generation and Management (GM) Forms
- Onsite Management Baseyear Demand
- Captive Management Baseyear Demand
- Commercial Management Baseyear Demand – RCRA Federally-Defined Hazardous Wastes from LQGs and TSDFs

Projection Data

Capacity planning estimates for future capacity needs and waste generation are based on historical data and current knowledge. After developing the 2024 baseline data, the EPA developed data for the 5-year projection (through 2029), and the 20-year projection (through 2044), pursuant to the 1993 Guidance. As noted in the 1993 Guidance, the workgroup determined that projects outside of the five year timeframe were unreliable so the five year projection is flatlined into the future. The projection years are intended to account for shifts in the management of wastes and incorporate changes in the operating status of hazardous waste facilities. The EPA knows of two captive incineration facilities that ceased operations. The management of their wastes shifted from captive to commercial management. The EPA accounted for this shift in waste management in the projection years.

The EPA does not believe that any current hazardous waste regulatory activities will substantially alter management behaviors within the next five years. Recent regulatory efforts on per- and polyfluoroalkyl substances (PFAS) are not expected to have a substantial effect on the future demand for hazardous waste capacity given that these wastes are already being managed at TSDFs and accounted for in the baseyear data. Appendix G provides information on the shipment of hazardous wastes likely to contain PFAS to commercial TSDFs in 2021, the baseyear for the demand data.

In addition, projected changes in demand can be due to anticipated plant closures and the opening of new facilities. However, the EPA is not aware of any facility closing or opening that would substantially affect the future demand for hazardous waste capacity.

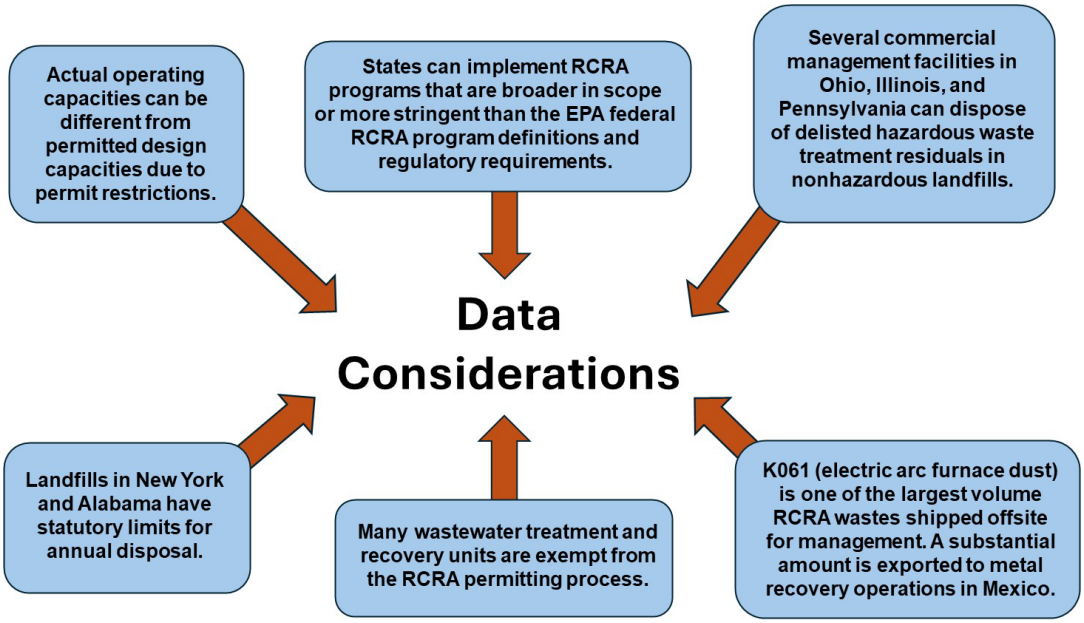
Because the EPA is not aware of any plants or commercial management facilities closing or opening that would affect the future availability of national capacity, capacity was held constant except for landfills. Given that landfill capacity is consumed over time, the EPA depleted the amount of available commercial landfill capacity over the projection period and also determined the last projected full year in which currently permitted commercial hazardous waste landfill capacity would be available (through 2049). The EPA's estimated depletion of landfills accounts for demand from RCRA federally-defined hazardous wastes from LQGs and TSDFs. It also accounts for demand from RCRA federally-defined hazardous wastes from Small Quantity Generators/Very Small Quantity Generators (SQGs/VSQGs)[9], foreign imports, foreign exports, and wastes that are not federally-defined as RCRA hazardous wastes (i.e., hazardous wastes regulated solely by state programs that are more stringent or broader in scope than the RCRA federal program) and processing materials.

Furthermore, the EPA took into account state-imposed caps on annual receipts at landfills in Alabama (600,000 tons) and New York (425,000 tons) by examining typical annual demand for these landfills. The landfill in New York is currently in the RCRA permit process to open new cells. At this time, the future capacity is unknown so the EPA considered the available and future capacity to be zero for this facility.

[9] SQGs generate more than 100 kilograms but less than 1,000 kilograms of hazardous waste per month. VSQGs may not accumulate more than 1,000 kilograms of hazardous waste at any time.

3. Methodology Issues

As mentioned earlier, the EPA developed baseyear demand data that includes only RCRA federally-defined hazardous waste. The EPA recognizes that such wastes represent only a portion of the demand for RCRA Subtitle C management capacity and that many other types of wastes and materials also constitute demand for commercial management units. In the following paragraphs, the EPA discusses some of these additional wastes, as well as some capacity estimating challenges, and how they were resolved for this assessment. Most of the agency's resolutions are conservative and result in overestimating demand and underestimating capacity.



Compilation of Permitted Operating Capacity Data

The agency found that some capacity information in RCRAInfo concerning permits issued under RCRA Subtitle C authority is of limited use for capacity planning purposes. In most cases, the reported capacity for the permit was the ideal, maximum design, or theoretical capacity of the unit, not the practical, real-time operating capacity. Using the theoretical capacity and not the practical capacity can overestimate the amount of readily available capacity.

A related challenge is converting all capacity estimates reported by facilities into consistent units of measurement. Theoretical design capacity estimates are often used for purposes of permit approvals and expansions of hazardous waste management units. These theoretical amounts are measured in units such as British Thermal Units (BTU) per hour for incinerators and total cubic yards or acres for landfills. Because "tons of waste per year" was the common measurement unit selected for aggregating all CAP information, many facility capacities had to be converted to tons of waste per year. This was done by making assumptions about operating conditions and average waste characteristics. For example, when an incinerator designed on a BTU per hour basis is converted to tons per year, assumptions about average waste heating value and density need to be made.

To evaluate actual available permitted and operating capacity for the facilities, the agency used capacity information from questionnaires sent to the major commercial management companies that reflected real-time operational limitations, such as downtime for maintenance and weather events, permit restrictions, and the optimization of operation for profit. The EPA based its calculations on limited consultations with the hazardous waste management facilities in question. Through these consultations, the agency was able to obtain remaining permitted capacity at commercial hazardous waste landfills, as well as information that was used to develop assumptions for real-time operation of BIFs and incinerators (e.g., waste heating value, hours or days of operation in a year). Appendix A to this document presents capacity information obtained through consultations with commercial hazardous waste management facilities.

Demand from Hazardous Wastes Requiring Specialty Management

Some wastes, such as explosive wastes, require management in units specifically designed for the unique management required by these wastes. These units typically are permitted to meet the exact specifications of the unique waste stream and are not available for management of all waste types. In particular, one commercial incinerator currently operating has been designed exclusively for treatment of explosive wastes. These units were identified as "specialty operations" and the capacity was not assumed to be available for all wastes types (refer to Appendix A for additional information on these commercial management facilities).

Demand from Facilities Generating Small Amounts of Hazardous Wastes

Demand on commercial hazardous waste capacity from SQGs/VSQGs is difficult to estimate for several reasons, including federal reporting requirements. All LQGs are required to submit BR data but SQGs/VSQGs are not required by federal law to complete a BR so information on their demand is not readily available. Many states do have state reporting regulations that are broader in scope than federal regulations and require that facilities generating small amounts of waste submit BR data. However, states may not always load the SQG/VSQG data into the EPA's RCRAInfo system.

Given these challenges, the EPA conducted an analysis to estimate the demand on commercial capacity from SQGs/VSQGs. To conduct this analysis, the EPA referred to information submitted in WR Forms by commercial hazardous waste management facilities that received hazardous waste from offsite. Using these forms, the EPA developed a list of all facilities shipping wastes to commercial hazardous waste management facilities (e.g., landfill facilities, incinerator facilities). The agency deleted from this list the generators who submitted a GM Form indicating that they shipped waste offsite for management. The agency then used information from commercial facilities who reported receiving waste from the remaining list of generators (i.e., the potential SQGs/VSQGs and transfer/storage facilities that manage SQG/VSQG wastes) to determine how SQG/VSQG wastes were managed. The Agency's analysis of this demand appears in Table VI under the column "SQG/VSQG Wastes" and Appendix D describes the methodology used in estimating the demand.

Demand from Foreign Imports and Exports

The EPA analyzed the data from foreign imports and exports of hazardous wastes separately from the process and cleanup waste. Pursuant to the 1993 Guidance, the EPA assumed these wastes place a demand on commercial capacity within the U.S. and thus have been incorporated into this assessment of available commercial capacity as a separate step. This assumption is made in case foreign countries make decisions to stop taking exported wastes. The demand from foreign imports and exports is incorporated into the assessment in the last step of the analyses.

A site required to file a BR must submit a GM Form for all hazardous waste that was used to determine the site's generator status, including hazardous wastes imported from a site located in a foreign country. In addition, if a site received hazardous waste directly from a generator located in a foreign country, the site must complete a WR Form for the waste treated, recovered, or disposed at the site. Thus, to compile hazardous waste import data at the national level, the EPA referred to data reported on the GM and WR Forms. (Refer to Appendix E for additional information on the process used by the EPA to compile the hazardous waste import data used in this assessment.) The agency's analysis of this demand appears in Table VI under the column "Wastes Received from Foreign Countries."

Unless required by their state, hazardous waste exporters are not required to submit a BR for the hazardous waste that was exported directly out of the U.S. to a site located in a foreign country. Thus, to compile hazardous waste export data at the national level, the EPA referred to RCRAInfo data on Annual Export Reports submitted to the agency under 40 CFR 262.83(g). (Refer to Appendix E for additional information on the process used by the EPA to compile the hazardous waste export data used in this assessment.) The Agency's analysis of demand from RCRA federally-defined hazardous wastes exported to foreign countries appears in Table VI under the column "Wastes Shipped to Foreign Countries."

Demand from Wastes that are Not RCRA Federally-Defined Hazardous Wastes

Wastes are defined as hazardous by the EPA if they are specifically named on one of four lists of hazardous wastes located in 40 CFR Part 261, Subpart D (F, K, P, U) or if they exhibit one of four characteristics located in 40 CFR Part 261, Subpart C (characteristic wastes). Because state hazardous waste programs can be broader in scope or more stringent than the federal regulations, some states regulate non-federal hazardous wastes as hazardous, such as used oil, PFAS, and polychlorinated biphenyl (PCB) cleanup wastes. For purposes of this analysis, those wastes are considered as wastes that are "not RCRA federally-defined hazardous wastes."

The overall management trend for not RCRA federally-defined hazardous wastes is incineration or disposal in landfills regulated pursuant to RCRA Subtitle D or under the Toxic Substances Control Act (TSCA). However, many RCRA Subtitle C TSDFs reported receiving substantial amounts of such wastes for management. This may be due to state hazardous waste regulations, which can be broader in scope and more stringent than the federal regulations. Regardless, the management of these wastes under Subtitle C requirements is relevant to the EPA's assessment because they represent demand for Subtitle C management units, such as landfills whose capacity depletes over time. The EPA was able to broadly estimate demand from not RCRA federally-defined hazardous wastes through limited consultations with commercial hazardous waste management facilities (refer to Appendix A) and other data sources. Much of the demand is from PCB cleanup wastes according to information obtained from the commercial hazardous waste landfills. The Agency's analysis of this demand appears in Table VI under the column "Not RCRA Federally-Defined Hazardous Wastes and Processing Materials."

4. Discussion of the National Capacity Assessment

Aggregation of National Baseyear Data

Tables I through III of this Report show the EPA's aggregation of baseyear data for RCRA federally-defined hazardous waste demand and capacity:

- Table I, "2021 National Baseyear Data Representing Hazardous Waste Generated and Managed Onsite," shows a national aggregation of 2021 baseyear demand data for waste managed onsite. (Exhibit B-1 in Appendix B presents a list of key facilities for the analyses.)

- Table II, "2021 National Baseyear Data Representing Management of Hazardous Waste at Captive Facilities," presents wastes managed at captive facilities. Captive facilities are facilities owned by the same company as the generator but which are at a different physical location. Their capacity can only be used by generators under the same ownership. (Exhibit B-2 in Appendix B presents a list of key facilities for the analyses.)

- Table III, "2021 National Baseyear Data Representing Management of Hazardous Waste at Commercial Facilities," shows wastes managed at commercial facilities. National demand estimates for the baseyear include RCRA federally-defined hazardous wastes managed onsite and shipped offsite for management at commercial facilities. The table also includes maximum operational commercial hazardous waste management capacity representing the 2024 baseyear data. (Exhibit B-3 in Appendix B presents a list of key facilities for the analyses.)

Exhibit 2 shows the location of key commercial management facilities on a map. The lists that follow provide baseyear capacity information for commercial energy recovery, incineration, and landfill facilities that manage RCRA federally-defined hazardous wastes.

Table I
2021 National Baseyear Data Representing Hazardous Waste Generated and Managed Onsite [a, b, c, d]

CAP Management Category	Hazardous Waste Managed Onsite (Tons)
RECOVERY	
Metals Recovery	141,300
Organics Recovery	16,800
Inorganics Recovery	28,000
Energy Recovery	358,900
TREATMENT	
Fuel Blending	600
Incineration	268,600
Wastewater Treatment	42,916,000
Sludge Treatment/Stabilization/Encapsulation	2,900
DISPOSAL	
Land Treatment or Application	100
Landfill	25,700
Deepwell or Underground Injection	20,289,700

[a] Exhibit excludes wastes generated and managed onsite by captive and commercial hazardous waste management facilities. Those wastes are included in Table II and Table III, which present baseyear data for captive and commercial management, respectively.

[b] Waste quantities include RCRA federally-defined hazardous wastes, not RCRA federally-defined hazardous wastes and processing materials, and hazardous wastes received from foreign countries for management in the U.S.

[c] Per the BR instructions, facilities must report the management method code that best identifies the last substantive purpose/operation performed at the site. Facilities are not allowed to report transfer/storage as the last substantive purpose/operation performed at the site. Therefore, the table does not include the transfer/storage CAP management category.

[d] All estimates are rounded to the nearest hundred. Refer to Appendix D for information on the derivation of these estimates.

Table II
2021 National Baseyear Data Representing Management of Hazardous Waste at Captive Facilities [a, b]

CAP Management Category	Hazardous Waste Managed at Captive Facilities (Tons)
RECOVERY	
Metals Recovery	1,300
Organics Recovery	17,900
Inorganics Recovery	86,300
Energy Recovery	110,300
TREATMENT	
Fuel Blending	200
Incineration	414,800
Wastewater Treatment	8,999,700
Sludge Treatment/Stabilization/Encapsulation	2,500
DISPOSAL	
Land Treatment or Application	0
Landfill	22,600
Deepwell or Underground Injection	3,532,000
TRANSFER/STORAGE	
Transfer/Storage	1,000

[a] Waste quantities include RCRA federally-defined hazardous wastes, not RCRA federally-defined hazardous wastes and processing materials, and hazardous wastes received from foreign countries for management in the U.S.

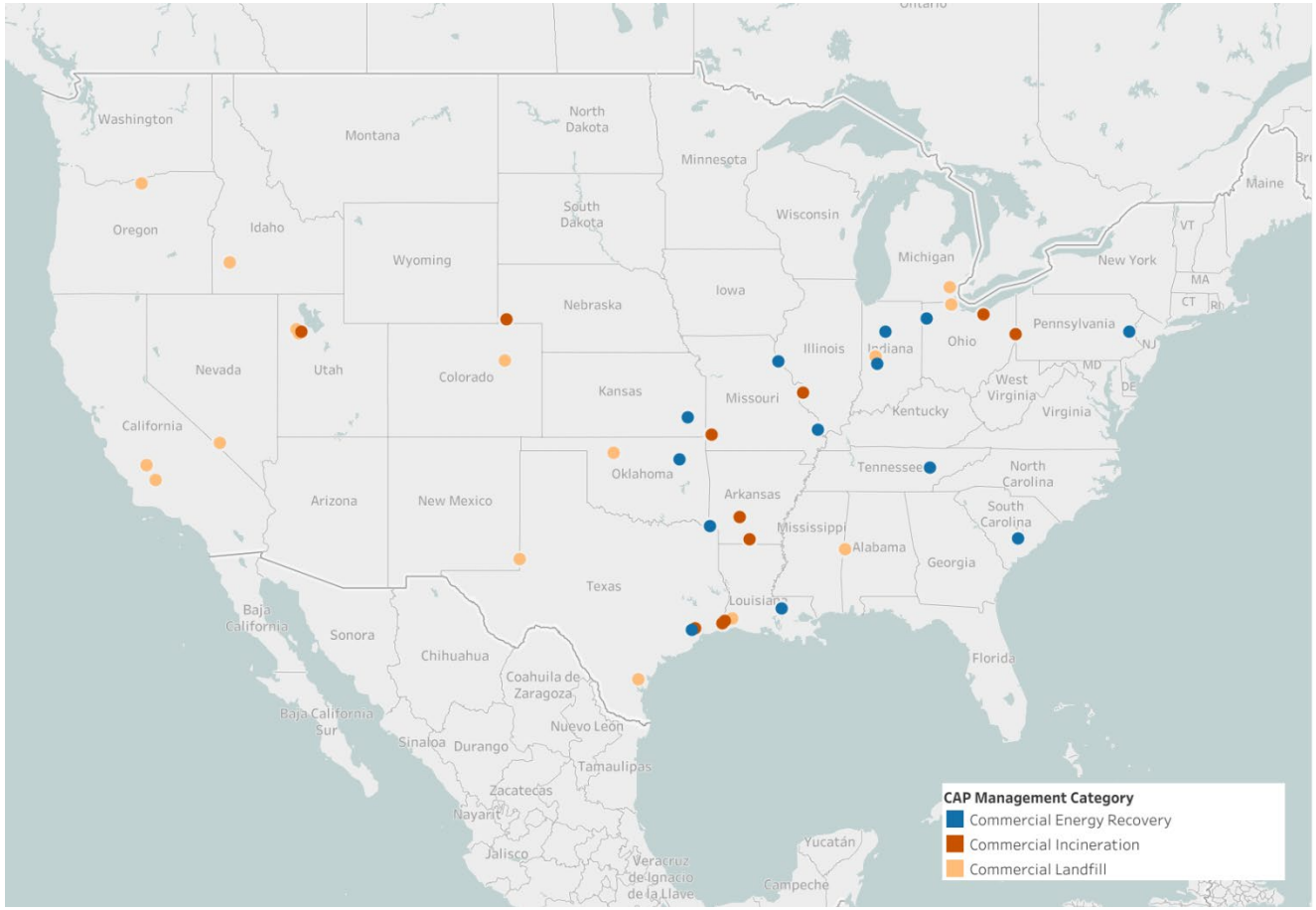
[b] All estimates are rounded to the nearest hundred. Refer to Appendix D for information on the derivation of these estimates.

Table III
2021 National Baseyear Data Representing Management of Hazardous Waste at Commercial Facilities [a]

CAP Management Category	Demand for Commercial Hazardous Waste Management Capacity [b]		Maximum Operational Commercial Hazardous Waste Management Capacity Baseyear Data (Tons/Year)
	Process Waste (Tons)	Cleanup Waste (Tons)	
RECOVERY			
Metals Recovery	1,117,800	200	2,400,000
Organics Recovery	168,700	100	2,500,000
Inorganics Recovery	99,700	11,500	520,000
Energy Recovery	979,500	4,700	1,900,000
TREATMENT			
Fuel Blending	446,200	500	4,300,000
Incineration [c]	475,500	22,300	890,000
Wastewater Treatment	2,933,200	23,600	12,000,000
Sludge Treatment/Stabilization/Encapsulation	355,900	154,400	8,100,000
DISPOSAL			
Landfill	773,400	67,100	75,600,000 (Total permitted tons)
Deepwell or Underground Injection	642,700	10,000	3,300,000
TRANSFER/STORAGE			
Transfer/Storage	367,900	11,400	

[a] There are no commercial land treatment/application facilities. Therefore, the table does not include the land treatment/application CAP management category.
[b] Demand waste quantities include RCRA federally-defined hazardous wastes only.
[c] Estimates on demand for commercial incineration capacity are based on information obtained through limited consultations conducted in July-November 2024.

Exhibit 2
Commercial Hazardous Waste Energy Recovery, Incineration, and Landfill Facilities



List of Commercial Energy Recovery (13 Facilities) [a]

EPA ID	Site Name	Type of Process Unit	Operational/Practical Energy Recovery Capacity (Tons)	Permit Expiration Date
ARD981512270	ASH GROVE CEMENT COMPANY	Cement Kiln	183,960 [b]	1/2/2028 [e]
IND005081542	HEIDELBERG MATERIALS US CEMENT LLC (formerly LEHIGH CEMENT COMPANY)	Cement Kiln	7,141	10/24/2024
IND006419212	LONE STAR GREENCASTLE WDF	Cement Kiln	320,409	7/18/2028
KSD031203318	ASH GROVE CEMENT COMPANY	Cement Kiln	141,540 [b]	2/15/2032 [e]
LAD008161234	ECO SERVICES OPERATIONS	Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid	185,991	9/29/2030
MOD054018288	GREEN AMERICA RECYCLING	Cement Kiln	272,903	11/17/2029 [e]
MOD981127319	LONE STAR INDUSTRIES	Cement Kiln	217,946	1/29/2030
OHD987048733	HOLCIM (US) INC	Cement Kiln	136,686	10/30/2029
OKD064558703	TULSA CEMENT	Cement Kiln	89,810 [b]	9/21/2033 [e]
PAD002389559	KEYSTONE CEMENT COMPANY	Cement Kiln	103,368 [d]	7/9/2019 [e]
SCD003351699	GIANT CEMENT COMPANY	Cement Kiln	142,100	5/25/2015
TND982109142	DIVERSIFIED SCIENTIFIC SERVICES INC. (DSSI)	Boiler	4,499 [b, c]	10/1/2017 [e]
TXD008099079	ECO SERVICES OPERATIONS HOUSTON	Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid	122,152	12/22/2032
		Total	**1,928,506**	
		Rounded Total	**1,900,000**	

[a] Unless otherwise noted, information was obtained through limited consultations conducted in July-November 2024.
[b] RCRAInfo Permit Module. Data current as of September 16, 2024. Capacity estimate based on 7,000 operating hours/unit/year.
[c] RCRAInfo Permit Module. Data current as of September 16, 2024. Capacity estimate based on 1 gallon equals 0.0042 short tons.
[d] Data compiled through limited consultations conducted during the development of the 2019 report.
[e] RCRAInfo Permit Module. Data current as of November 18, 2024.

List of Commercial Incinerators (11 Facilities) [a]

Handler ID	Handler Name	Operational/Practical Incineration Capacity (Tons)	Permit Expiration Date
ARD006354161	ELEMENTAL ENVIRONMENTAL SOLUTIONS LLC (formerly REYNOLDS METALS COMPANY)	167,205	6/18/2020
ARD069748192	CLEAN HARBORS EL DORADO	145,000	6/27/2028 [c]
ILD098642424	VEOLIA ES TECHNICAL SOLUTIONS	30,663	12/2/2019 [c]
NED981723513	CLEAN HARBORS ENV SERVICES	60,000	9/15/2027
OHD048415665	ROSS INCINERATION SERVICES	88,000	1/29/2024
OHD980613541	HERITAGE THERMAL SERVICES	70,000	1/17/2029
TXD000838896	VEOLIA ES TECHNICAL SOLUTIONS	74,000	5/24/2029
TXD055141378	CLEAN HARBORS DEER PARK	165,000	8/21/2028 [c]
TXR000085254	HERITAGE THERMAL OF TEXAS	32,809	5/9/2028 [c]
UTD981552177	CLEAN HARBORS ARAGONITE	67,000	6/20/2033 [d]
	Total	**899,677**	
	Rounded Total	**890,000**	
Specialty Operations (Capacity Not Available to All Waste Codes) [b]			
MOD985798164	EBV EXPLOSIVES ENVIRONMENTAL COMPANY	11,550	5/25/2031 [c]
	Rounded Total	**11,000**	

[a] Unless otherwise noted, information was obtained through limited consultations conducted in July-November 2024.

[b] These facilities offer limited capacity (i.e., incineration capacity is not available to all the EPA waste codes) and thus, are not included in the available commercial incineration capacity estimate.

[c] RCRAInfo Permit Module. Data current as of November 18, 2024.

[d] Utah Department of Environmental Quality, "Aragonite Permit: Clean Harbors, LLC." Data current as of November 18, 2024.

List of Commercial Landfills (17 Facilities) [a]

Handler ID	Handler Name	Available Permitted Landfill Capacity (Tons)	Permit Expiration Date
ALD000622464	CHEMICAL WASTE MANAGEMENT (EMELLE)	922,484	9/15/2015 [d]
ARD006354161	ELEMENTAL ENVIRONMENTAL SOLUTIONS LLC	1,081,569	6/18/2020
CAD980675276	CLEAN HARBORS BUTTONWILLOW	6,018,626	4/6/2006 [d]
CAT000646117	CHEMICAL WASTE MANAGEMENT (KETTLEMAN)	3,360,000	6/16/2013 [d]
COD991300484	CLEAN HARBORS DEER TRAIL	874,664	10/24/2029
IDD073114654	US ECOLOGY IDAHO SITE B	6,197,196	7/28/2026 [d]
IND980503890	HERITAGE ENVIRONMENTAL SERVICES	13,766,000	3/13/2025
LAD000777201	CHEMICAL WASTE MANAGEMENT (LAKE CHARLES)	606,838	8/10/2020 [d]
MID048090633	US ECOLOGY WAYNE DISPOSAL	14,700,000	5/4/2022 [d]
NVT330010000	US ECOLOGY NEVADA	6,928,587	12/8/2016 [d]
OHD045243706	ENVIROSAFE SERVICES OF OHIO	199,500	9/30/2026
OKD065438376	CLEAN HARBORS LONE MOUNTAIN	2,484,430	4/1/2021
ORD089452353	CHEMICAL WASTE MANAGEMENT OF THE NW	4,032,096 [b]	8/10/2016 [d]
TXD069452340	US ECOLOGY TEXAS	8,805,848	3/25/2023 [d]
TXD988088464	WASTE CONTROL SPECIALISTS	1,000,000 [c]	7/19/2031 [d]
UTD982598898	ENERGYSOLUTIONS CLIVE FACILITY	495,352	4/4/2013
UTD991301748	CLEAN HARBORS GRASSY MOUNTAIN	4,181,013	10/4/2033
	Total	**75,654,203**	
	Rounded Total	**75,600,000**	

[a] Unless otherwise noted, information was obtained through limited consultations conducted in July-November 2024.

[b] Density is based on 1.084 tons per cubic yard.

[c] Estimate based on data compiled through limited consultations conducted during the development of the 2019 report.

[d] RCRAInfo Permit Module. Data current as of November 18, 2024.

National Assessment of Future Capacity

For the national assessment of future capacity, the EPA first projected remaining commercial hazardous waste capacity not utilized by RCRA federally-defined hazardous waste. This is the maximum commercial hazardous waste management capacity projected through December 31, 2049 from Table V minus the projected demand through December 31, 2049 from Table IV.

- Table IV, "National Baseline and Projected Demand for Commercial Hazardous Waste Management Capacity," reports projected demand of RCRA federally-defined hazardous wastes generated by LQGs and TSDFs for commercial capacity. Demand is projected for both process and cleanup wastes.

- Table V, "National Baseline and Projected Maximum Commercial Hazardous Waste Management Capacity," shows capacity data for the baseline and projection years.

The national assessment of hazardous waste capacity over the next 20 years and beyond is presented in Table VI, “National Capacity Assessment of Projected Remaining Commercial Hazardous Waste Management Capacity.” As discussed earlier, the assessment includes all RCRA federally-defined hazardous wastes and wastes that are not RCRA federally-defined hazardous wastes potentially placed into a treatment or disposal unit. In addition, the assessment focuses on commercial management for energy recovery, incineration, and landfilling because these management types are often the costliest to operate and most difficult to permit.

As shown in Table VI, there is adequate capacity through December 31, 2049 for all CAP management categories; this represents 25 years of available capacity.

Exhibits 3 through 5 provide graphic illustrations of the capacity assessments for the management categories that include the facilities in the lists provided previously in this section. As mentioned above, the national assessment of hazardous waste capacity focused on commercial energy recovery, incineration, and landfill facilities.

Table IV
National Baseline and Projected Demand for Commercial Hazardous Waste Management Capacity

Data represents projected demand from only Large Quantity Generators (LQGs) and Treatment, Storage and Disposal Facilities (TSDFs)

CAP Management Category	Projected Demand for Commercial Hazardous Waste Management Capacity [a]							
	2024 Baseline		2029		2044		2049	
	Process Waste (Tons)	Cleanup Waste (Tons)	Process Waste (Tons)	Cleanup Waste (Tons)	Process Waste (Tons)	Cleanup Waste (Tons)	Process Waste (Tons)	Cleanup Waste (Tons)
RECOVERY								
Metals Recovery	1,117,800	100	1,117,800	100	1,117,800	100	1,117,800	100
Organics Recovery	168,700	100	168,700	100	168,700	100	168,700	100
Inorganics Recovery	99,700	5,800	99,700	5,800	99,700	5,800	99,700	5,800
Energy Recovery	979,500	2,400	979,500	2,400	979,500	2,400	979,500	2,400
TREATMENT								
Fuel Blending	446,200	300	446,200	300	446,200	300	446,200	300
Incineration [b]	502,400	22,300	502,400	22,300	502,400	22,300	502,400	22,300
Wastewater Treatment	2,933,200	15,900	2,933,200	15,900	2,933,200	15,900	2,933,200	15,900
Sludge Treatment/ Stabilization/Encapsulation	355,900	86,600	355,900	86,600	355,900	86,600	355,900	86,600
DISPOSAL								
Landfill	773,400	36,300	773,400	36,300	773,400	36,300	773,400	36,300
Deepwell or Underground Injection	642,700	5,200	642,700	5,200	642,700	5,200	642,700	5,200

[a] Baseline and projected demand estimates represent demand for commercial management capacity for the entire year (i.e., between January 1 and December 31).

[b] Estimates for incineration are based on information obtained through limited consultations conducted in July-November 2024. Estimates also include projected demand from wastes previously managed at two captive incineration facilities. These wastes are now being managed at commercial incineration facilities.

Table V
National Baseline and Projected Maximum Commercial Hazardous Waste Management Capacity [a]

CAP Management Category	Baseline [b], 2024 (Tons/Year)	Maximum Commercial Hazardous Waste Management Capacity [c]		
		2029 (Tons/Year)	2044 (Tons/Year)	***2049 (Tons/Year)***
RECOVERY				
Metals Recovery	2,400,000	2,400,000	2,400,000	***2,400,000***
Organics Recovery	2,500,000	2,500,000	2,500,000	***2,500,000***
Inorganics Recovery	520,000	520,000	520,000	***520,000***
Energy Recovery	1,900,000	1,900,000	1,900,000	***1,900,000***
TREATMENT				
Fuel Blending	4,300,000	4,300,000	4,300,000	***4,300,000***
Incineration	890,000	890,000	890,000	***890,000***
Wastewater Treatment	12,000,000	12,000,000	12,000,000	***12,000,000***
Sludge Treatment/ Stabilization/Encapsulation	8,100,000	8,100,000	8,100,000	***8,100,000***
DISPOSAL				
Landfill	75,600,000 (Total permitted tons)	71,551,500 (Total permitted tons)	59,406,000 (Total permitted tons)	***55,357,500 (Total permitted tons)***
Deepwell or Underground Injection	3,300,000	3,300,000	3,300,000	***3,300,000***

[a] Estimates do not take into account capacity not currently permitted but potentially available for operation.

[b] Baseyear to baseline adjustment reflects a year of landfill consumption from RCRA federally-defined hazardous wastes, SQG/VSQG wastes, hazardous waste exports, hazardous waste imports, and not RCRA federally-defined hazardous wastes and processing materials.

[c] For landfills, the projection year estimates only show consumption from RCRA federally-defined hazardous wastes.

Table VI
National Capacity Assessment of Projected Remaining Commercial Hazardous Waste Management Capacity through December 31, 2049 [a, b]

CAP Management Category	*Data from Table V: Projected Remaining Commercial Hazardous Waste Capacity Not Utilized by LQGs and TSDFs (Tons/Year)* [c]	Estimated Additional Demand for Commercial Capacity				Assessment of Continued Availability of Commercial Capacity through December 31, 2049
		SQG/VSQG Wastes (Tons)	Wastes Shipped to Foreign Countries (Tons)	Wastes Received from Foreign Countries (Tons)	Not RCRA Federally-Defined Hazardous Wastes (Tons)	
RECOVERY						
Metals Recovery	***1,282,100***	99,100	1,130,200	21,100	2,300	Sufficient Capacity
Organics Recovery	***2,331,200***	31,100	36,100	2,100	3,600	Sufficient Capacity
Inorganics Recovery	***414,500***	18,600	14,200	16,100	336,900	Sufficient Capacity
Energy Recovery	***918,100***	62,000	10,300	3,400	2,200	Sufficient Capacity
TREATMENT						
Fuel Blending	***3,853,500***	133,500	100	6,400	6,400	Sufficient Capacity
Incineration	***365,300***	37,800	29,900	7,500	163,600	Sufficient Capacity
Wastewater Treatment	***9,050,900***	3,966,900	28,700	13,700	8,900	Sufficient Capacity
Sludge Treatment/ Stabilization/Encapsulation	***7,657,500***	104,500	9,300	700	28,900	Sufficient Capacity
DISPOSAL						
Landfill	***55,357,500 (Total permitted tons remaining after depleting demand from LQGs and TSDFs)***	Annual 76,100 25-Year Total 1,902,500	Annual 162,100 25-Year Total 4,052,500	Annual 32,200 25-Year Total 805,000	Annual 1,900,000 [d] 25-Year Total 47,500,000	Sufficient Capacity
Deepwell or Underground Injection	***2,652,100***	12,000	0	1,300	0	Sufficient Capacity

[a] There are no commercial land treatment/application facilities. Therefore, the table does not include the land treatment/application CAP management category.

[b] The table presents the last substantive purpose/operation performed at a commercial hazardous waste management facility. Therefore, the table does not include the transfer/storage CAP management category.

[c] Estimates obtained by subtracting annual process and cleanup waste demand from LQGs and TSDFs (Table III) as of December 31, 2049 from the maximum commercial hazardous waste management capacity as of December 31, 2049 (Table V).

[d] Average of information compiled through limited consultations conducted during the development of the 2015 and 2019 reports (1.8 million tons and 2.0 million tons, respectively). The vast majority of these volumes are stabilizing agents and soil top cover.

Exhibit 3
Commercial Energy Recovery Capacity Assessment

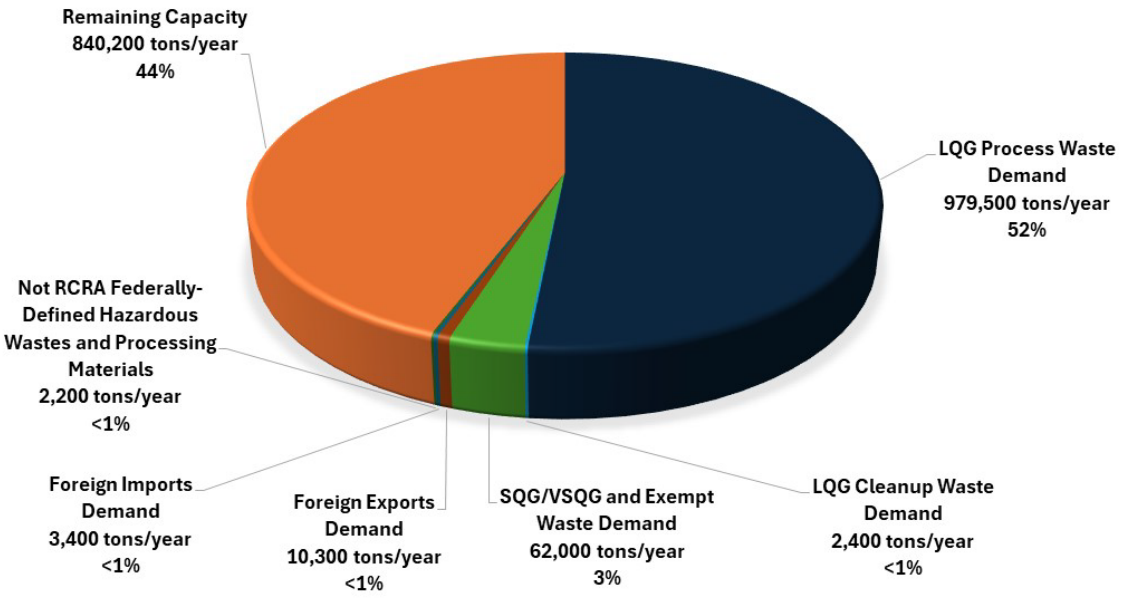
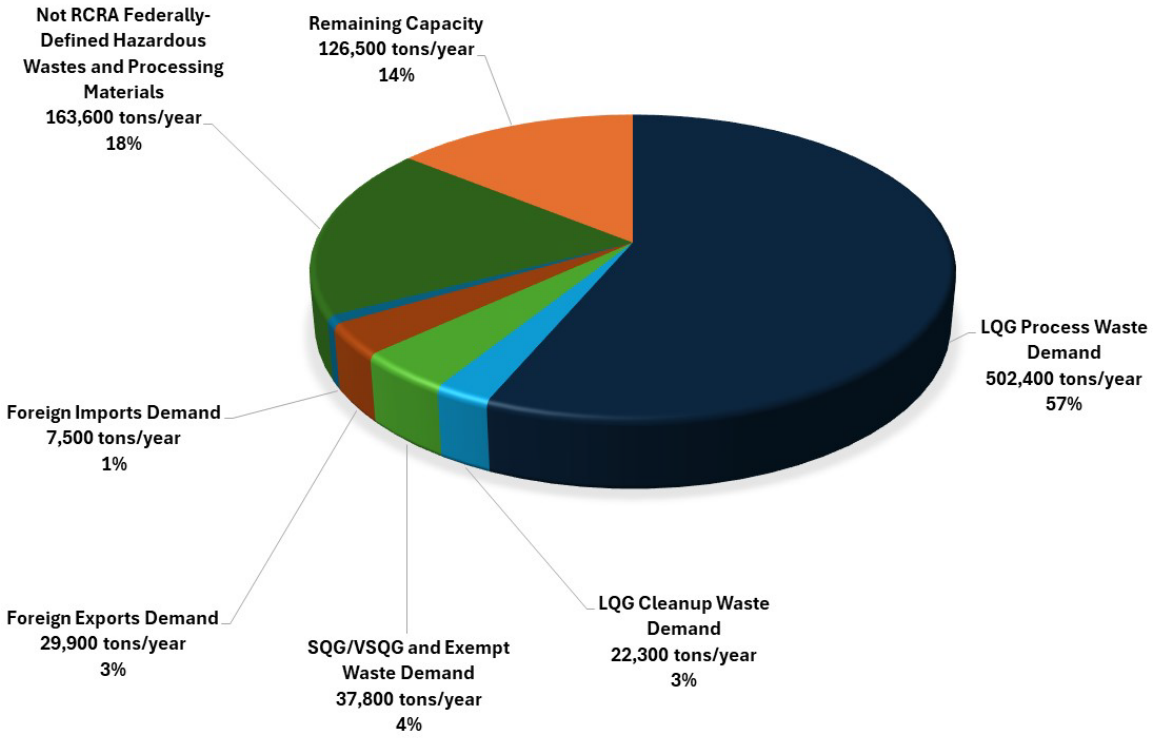
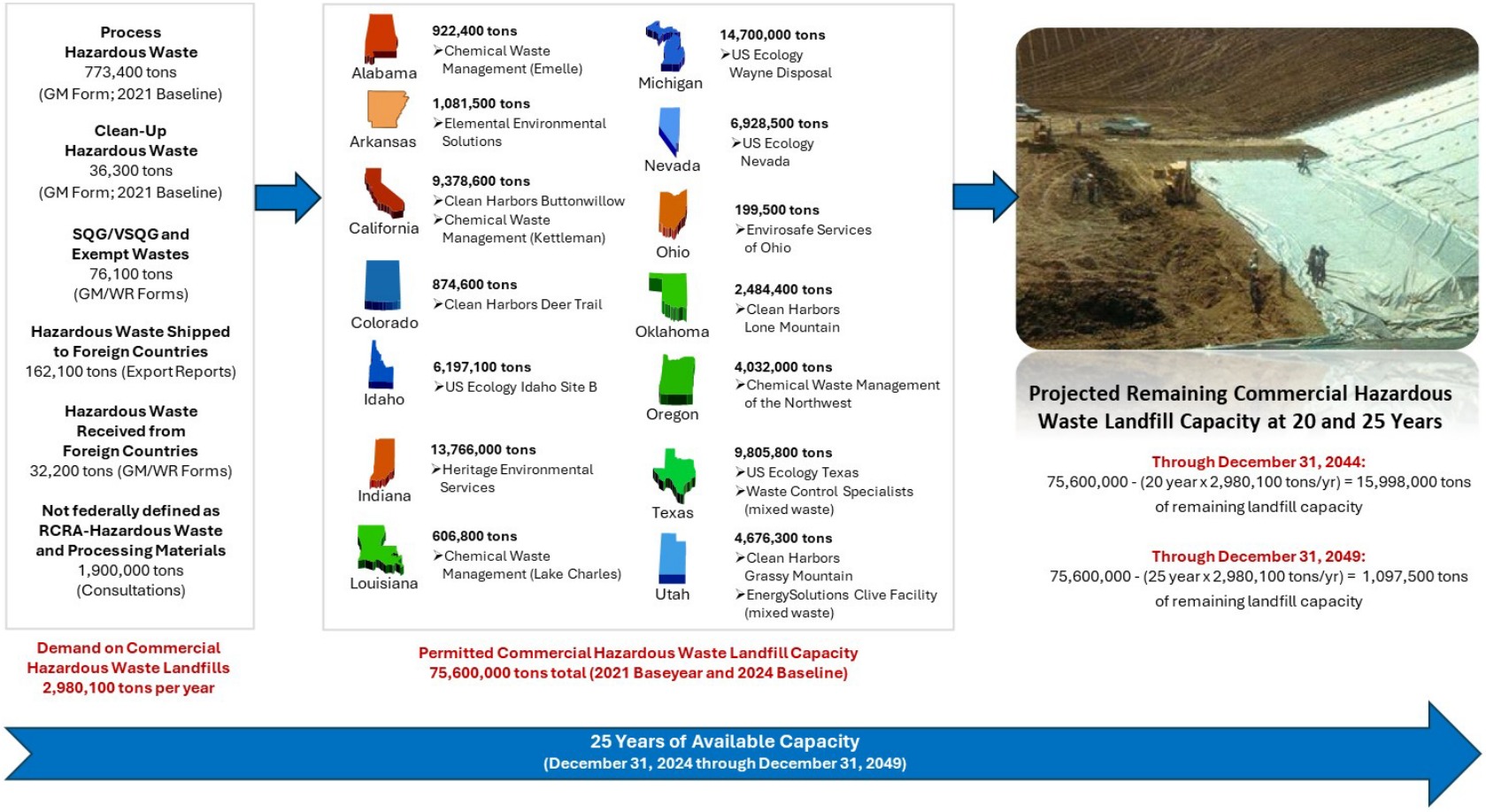


Exhibit 4
Commercial Incineration Capacity Assessment [a]



[a] Exhibit excludes capacity for EBV Explosives Environmental Company because this facility offers limited capacity and is not included in commercial incineration capacity that can accept all waste codes.

Exhibit 5
Data Development for the Landfill CAP Management Category [a]



[a] Graphic in the exhibit obtained from the following web site: http://www.golder.com/in/modules.php%3Fname%3DProjects%26sp_id%3D80%26sector_id%3D44. Web site last accessed on December 15, 2014.

5. Conclusions

The EPA has updated the national assessment of capacity for the treatment and disposal of hazardous wastes. Based on the analyses presented in this report, the agency has determined that adequate national capacity is available for the treatment and disposal of hazardous waste expected to be generated for the next 25 years (i.e., through December 31, 2049). Based on this conclusion, any state entering into a State Superfund Contract or remedial response Cooperative Agreement between January 1, 2025 and December 31, 2029, may provide an assurance of adequate hazardous waste treatment or disposal capacity as specified under CERCLA 104(c)(9) by referencing this report.

Although the EPA believes there is adequate availability of national capacity, there are not large amounts of excess capacity and especially incineration capacity is currently limited. However, two new units are in the RCRA permitting process and expected to be operational in 2025. States and regional groupings of states should continue hazardous waste management planning activities and waste minimization efforts to ensure that adequate capacity continues to exist into the future.

While currently there is adequate hazardous waste treatment and disposal capacity, there is the potential for unforeseen circumstances (e.g., new federal regulations, closure of onsite and captive management units, unanticipated downtime, permit denials, taxes on management, statutory limitations on landfills, changing market conditions) that could affect the future availability of management capacity. Nationally, the industry is consolidating and restructuring as indicated by the existence of fewer landfills, incinerators, and energy recovery facilities permitted under RCRA Subtitle C requirements than reported in the 1993 CAP data submissions. The dynamic hazardous waste market and the uncertainty of the permitting process make it difficult to guarantee that the current surpluses of hazardous waste management capacity will continue to exist.

Although the agency believes the information presented in this report demonstrates the future availability of treatment and disposal capacity, the agency will continue to periodically collect and evaluate data to ensure that the requirements of CERCLA 104(c)(9) are satisfied. Assuring adequate capacity requires active planning on the part of all parties, including states, tribal governments, industry, and commercial management facilities. This necessitates that all states periodically examine their capacity situations, identify areas of concern, and develop plans that consider future needs. These planning exercises will add to states' knowledge of their hazardous waste management systems, help them implement waste minimization programs, and encourage companies to replace inefficient treatment technologies with safer and more innovative technologies. This can be especially important if studies of hazardous waste management data show capacity issues for specific waste streams anticipated to be generated within a state's borders.

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ICF, Personal communication with Envirosafe Services of Ohio representative, June-November 2024.

ICF, Personal communication with Giant Cement Company representative, June-November 2024.

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ICF, Personal communication with Heidelberg Materials North America representative, June-November 2024.

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Appendix A
Commercial Hazardous Waste Management Facility Data

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Commercial Hazardous Waste Management Facility Data

This appendix provides commercial hazardous waste management facility data used in conducting the national capacity assessment. In particular, this appendix provides the following information:

- Summary of demand and capacity data for:
  - Energy recovery/boilers and industrial furnaces (BIFs)
  - Incineration
  - Landfills

- Summary of capacity data for:
  - Metals recovery
  - All other CAP management categories

Click on any of the above links for quick access to specific sections of the appendix.

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Exhibit A-1a
Commercial Hazardous Waste Energy Recovery Facilities – Demand [a]

Handler ID	Handler Name	Wastes Managed through Energy Recovery in 2021 (Tons)			
		RCRA Federally-Defined Hazardous Wastes - LQGs	RCRA Federally-Defined Hazardous Wastes - SQGs/VSQGs	Not RCRA Federally-Defined Hazardous Wastes and Processing Materials	Total
ARD981512270	ASH GROVE CEMENT COMPANY	Not Available	Not Available	Not Available	Not Available
IND005081542	HEIDELBERG MATERIALS US CEMENT LLC (formerly LEHIGH CEMENT COMPANY)	114,345	187	Not Reported	114,531
IND006419212	LONE STAR GREENCASTLE WDF	93,859	Included in LQG quantity	9,822	103,681
KSD031203318	ASH GROVE CEMENT COMPANY	Not Available	Not Available	Not Available	Not Available
LAD008161234	ECO SERVICES OPERATIONS	18,283	0	Not Reported	18,283
MOD054018288	GREEN AMERICA RECYCLING	65,836	2,788	Not Reported	68,624
MOD981127319	LONE STAR INDUSTRIES	129,239	Included in LQG quantity	6,261	135,500
OHD987048733	HOLCIM (US) INC	91,766	0	Not Reported	91,766
OKD064558703	TULSA CEMENT	Not Available	Not Available	Not Available	Not Available
PAD002389559	KEYSTONE CEMENT COMPANY	Not Available	Not Available	Not Available	Not Available
SCD003351699	GIANT CEMENT COMPANY	46,880	0	0	46,880
TND982109142	DIVERSIFIED SCIENTIFIC SERVICES INC. (DSSI)	Not Available	Not Available	Not Available	Not Available
TXD008099079	ECO SERVICES OPERATIONS HOUSTON	9,174	22	Not Reported	9,196
Total		**569,382**	**2,997**	**16,083**	**588,461**
Rounded Total		**569,400**	**3,000**	**16,100**	**588,500**

[a] Information was obtained through limited consultations conducted in July-November 2024.

Exhibit A-1b
Commercial Hazardous Waste Energy Recovery Facilities – Capacity [a]

Handler ID	Handler Name	Operational/Practical Incineration Capacity (Tons)			Permit Information for Units Operating and Actively Managing Hazardous Wastes	
		Pumpable	Non-Pumpable	Total	Expiration Date	Permit Renewal
ARD981512270	ASH GROVE CEMENT COMPANY	Not Available	Not Available	Not Available	Not Available	Not Available
IND005081542	HEIDELBERG MATERIALS US CEMENT LLC (formerly LEHIGH CEMENT COMPANY)	5,570	1,571	7,141	10/24/2024	Renewal application submitted on April 26, 2024 and review pending
IND006419212	LONE STAR GREENCASTLE WDF	289,593	30,816	320,409	7/18/2028	The renewal is due by January 20, 2028 and we plan to start working on it in 2027
KSD031203318	ASH GROVE CEMENT COMPANY	Not Available	Not Available	Not Available	Not Available	Not Available
LAD008161234	ECO SERVICES OPERATIONS	185,991	0	185,991	9/29/2030	Not Reported
MOD054018288	GREEN AMERICA RECYCLING	131,648	141,255	272,903	In 2029	In 2027
MOD981127319	LONE STAR INDUSTRIES	Not Reported	Not Reported	217,946	1/29/2030	We plan to begin working on the renewal application in 2028
OHD987048733	HOLCIM (US) INC	136,686	0	136,686	10/30/2029	Renewal application due at least 180 days prior; work to begin the renewal application would begin in approximately May 2028
OKD064558703	TULSA CEMENT	Not Available	Not Available	Not Available	Not Available	Not Available
PAD002389559	KEYSTONE CEMENT COMPANY	Not Available	Not Available	Not Available	Not Available	Not Available
SCD003351699	GIANT CEMENT COMPANY	115,500	26,600	142,100	5/25/2015	Timely renewal requested 11/2014 with a complete application determination
TND982109142	DIVERSIFIED SCIENTIFIC SERVICES INC. (DSSI)	Not Available	Not Available	Not Available	Not Available	Not Available
TXD008099079	ECO SERVICES OPERATIONS HOUSTON	122,152	0	122,152	12/22/2032	More than 6 months before application due date
Total		**987,140**	**200,242**	**1,405,328**		
Rounded Total		**987,100**	**200,200**	**1,405,300**		

[a] Information was obtained through limited consultations conducted in July-November 2024.

Exhibit A-2a
Commercial Hazardous Waste Incineration Facilities – Demand [a, b]

Handler ID	Handler Name	Wastes Incinerated in 2021 (Tons)			
		RCRA Federally-Defined Hazardous Wastes - LQGs	RCRA Federally-Defined Hazardous Wastes - SQGs/VSQGs	Not RCRA Federally-Defined Hazardous Wastes and Processing Materials	Total
ARD006354161	ELEMENTAL ENVIRONMENTAL SOLUTIONS LLC (formerly REYNOLDS METALS COMPANY)	23,145	2,418	63,402	88,965
ARD069748192	CLEAN HARBORS EL DORADO	101,519	8,054	43,705	153,278
ILD098642424	VEOLIA ES TECHNICAL SOLUTIONS	23,529	621	0	24,150
NED981723513	CLEAN HARBORS ENV SERVICES	29,410	8,086	17,634	55,130
OHD048415665	ROSS INCINERATION SERVICES	70,338	74	9,498	79,910
OHD980613541	HERITAGE THERMAL SERVICES	44,453	5,324	0	49,777
TXD000838896	VEOLIA ES TECHNICAL SOLUTIONS	46,176	2,108	15,204	63,488
TXD055141378	CLEAN HARBORS DEER PARK	102,535	5,854		108,389
TXR000085254	HERITAGE THERMAL OF TEXAS	13,882	0	0	13,882
UTD981552177	CLEAN HARBORS ARAGONITE	42,755	5,146	14,112	62,013
Total		**497,742**	**37,685**	**163,555**	**698,982**
Rounded Total		**497,800**	**37,700**	**163,600**	**699,000**
Specialty Operations (Capacity Not Available to All Waste Codes) [c]					
MOD985798164	EBV EXPLOSIVES ENVIRONMENTAL COMPANY	7,794	67	0	7,861
Total		**7,794**	**67**	**0**	**7,861**
Rounded Total		**7,800**	**100**	**0**	**7,900**

[a] Open burning/open detonation (OB/OD) units are considered to be part of the incineration management category.
[b] Information was obtained through limited consultations conducted in July-November 2024.
[c] This facility offers limited capacity (i.e., incineration capacity is not available to all the EPA waste codes) and thus, is not included in the available commercial incineration capacity estimate.

Exhibit A-2b
Commercial Hazardous Waste Incineration Facilities – Capacity [a, b]

Handler ID	Handler Name	Operational/Practical Incineration Capacity (Tons)			Permit Information for Units Operating and Actively Managing Hazardous Waste	
		Pumpable	Non-Pumpable	Total	Expiration Date	Permit Renewal
ARD006354161	ELEMENTAL ENVIRONMENTAL SOLUTIONS LLC (formerly REYNOLDS METALS COMPANY)	55,515	111,690	167,205	6/18/2020	Veolia is currently in the renewal process pending approval
ARD069748192	CLEAN HARBORS EL DORADO	40,000	105,000	145,000	Not Reported	Approximately January 2027
ILD098642424	VEOLIA ES TECHNICAL SOLUTIONS	21,021	9,642	30,663	2019	Veolia's RCRA Part B Permit is currently in appeal with the Illinois EPA, but a renewal application was submitted in 2019 and deemed administratively complete on July 24, 2019
NED981723513	CLEAN HARBORS ENV SERVICES	30,000	30,000	60,000	9/15/2027	Renewal process to begin approximately March 2026
OHD048415665	ROSS INCINERATION SERVICES	44,500	43,500	88,000	1/29/2024	RIS submitted renewal applications to both Ohio EPA and the US EPA, respectively greater than 180 days before the January 29, 2024 expiration date, and RIS is currently operating in accordance with the terms and conditions of its expired permits while awaiting processing and renewal by the above agencies
OHD980613541	HERITAGE THERMAL SERVICES	42,000	28,000	70,000	1/17/2029	HTS will start the renewal process 1 year prior to expiration with the submission occurring prior 7/21/2028
TXD000838896	VEOLIA ES TECHNICAL SOLUTIONS [b]	39,752	65,132	74,000	5/24/2029	The renewal application will be submitted to the TCEQ at least 180 days prior to the expiration date. Preparation of application documents will begin 1 - 2 years prior to expiration date.
TXD055141378	CLEAN HARBORS DEER PARK	100,000	65,000	165,000	Not Reported	Not Reported
TXR000085254	HERITAGE THERMAL OF TEXAS	Not Reported	Not Reported	32,809	Not Reported	Not Reported
UTD981552177	CLEAN HARBORS ARAGONITE	27,000	40,000	67,000	6/20/2033	Not Reported
	Total	**399,788**	**497,964**	**899,677**		
	Rounded Total	**399,700**	**497,900**	**899,600**		
Specialty Operations (Capacity Not Available to All Waste Codes) [c]						
MOD985798164	EBV EXPLOSIVES ENVIRONMENTAL COMPANY	0	11,550	11,550	2031	2029

Exhibit A-2b
Commercial Hazardous Waste Incineration Facilities – Capacity [a, b]

Handler ID	Handler Name	Operational/Practical Incineration Capacity (Tons)			Permit Information for Units Operating and Actively Managing Hazardous Waste	
		Pumpable	Non-Pumpable	Total	Expiration Date	Permit Renewal
Total		0	11,550	11,550		
Rounded Total		0	11,500	11,500		

[a] Open burning/open detonation (OB/OD) units are considered to be part of the incineration management category.
[b] Information was obtained through limited consultations conducted in July-November 2024.
[c] This facility offers limited capacity (i.e., incineration capacity is not available to all the EPA waste codes) and thus, is not included in the available commercial incineration capacity estimate.

Exhibit A-3a
Commercial Hazardous Waste Landfill Facilities – Demand [a]

Handler ID	Handler Name	Wastes Landfilled in 2021 (Tons)			
		RCRA Federally-Defined Hazardous Wastes - LQGs	RCRA Federally-Defined Hazardous Wastes - SQGs/VSQGs	Not RCRA Federally-Defined Hazardous Wastes and Processing Materials	Total
ALD000622464	CHEMICAL WASTE MANAGEMENT (EMELLE)	84,107	9,353	Not Reported	93,460
ARD006354161	ELEMENTAL ENVIRONMENTAL SOLUTIONS LLC	97,268	32,117	Not Reported	129,385
CAD980675276	CLEAN HARBORS BUTTONWILLOW	1,992	1,389	Not Reported	3,381
CAT000646117	CHEMICAL WASTE MANAGEMENT (KETTLEMAN)	Not Reported	Not Reported	Not Reported	Not Reported
COD991300484	CLEAN HARBORS DEER TRAIL	15,137	2,400	Not Reported	17,537
IDD073114654	US ECOLOGY IDAHO SITE B	20,422	2,545	Not Reported	22,967
IND980503890	HERITAGE ENVIRONMENTAL SERVICES	115,231	419	80,077	195,727
LAD000777201	CHEMICAL WASTE MANAGEMENT (LAKE CHARLES)	29,692	105	Not Reported	29,797
MID048090633	US ECOLOGY WAYNE DISPOSAL	123,537	3,121	Not Reported	126,658
NVT330010000	US ECOLOGY NEVADA	72,667	12,068	Not Reported	84,735
OHD045243706	ENVIROSAFE SERVICES OF OHIO c	26,182	Not Reported	8,310	34,492
OKD065438376	CLEAN HARBORS LONE MOUNTAIN	71,677	2,290	Not Reported	73,967
ORD089452353	CHEMICAL WASTE MANAGEMENT OF THE NW	21,287	216	Not Reported	21,503
TXD069452340	US ECOLOGY TEXAS	45,203	4,355	Not Reported	49,558
TXD988088464	WASTE CONTROL SPECIALISTS	Not Available	Not Available	Not Available	Not Available
UTD982598898	ENERGYSOLUTIONS CLIVE FACILITY	1,287	Included with LQG quantity	89	1,376
UTD991301748	CLEAN HARBORS GRASSY MOUNTAIN	36,278	3,387	Not Reported	39,665
	Total	**761,967**	**73,765**	**88,476**	**924,208**
	Rounded Total	**762,000**	**73,800**	**88,500**	**924,300**

[a] Information was obtained through limited consultations conducted in July-November 2024.

Exhibit A-3b
Commercial Hazardous Waste Landfill Facilities – Capacity [a]

Handler ID	Handler Name	Remaining Maximum, Permitted Operational Capacity at the End of 2023 (Tons)	Permit Information for Units Operating and Actively Managing Hazardous Waste	
			Expiration Date	Permit Renewal
ALD000622464	CHEMICAL WASTE MANAGEMENT (EMELLE)	922,484	Not Reported	Not Reported
ARD006354161	ELEMENTAL ENVIRONMENTAL SOLUTIONS LLC	1,081,569	6/18/2020	Veolia is currently in the renewal process pending approval
CAD980675276	CLEAN HARBORS BUTTONWILLOW	6,018,626	2006	Current permit expired in 2006 but remains in effect until such time as the new permit is issued. The renewal application was submitted at least 180 days prior to permit expiration (2005)
CAT000646117	CHEMICAL WASTE MANAGEMENT (KETTLEMAN)	3,360,000	2013	Expired, been in renewal since 2013
COD991300484	CLEAN HARBORS DEER TRAIL	874,664	10/24/2029	Renewal application will be submitted by April 27, 2029, 180 days prior to expiration
IDD073114654	US ECOLOGY IDAHO SITE B	6,197,196	Not Reported	Not Reported
IND980503890	HERITAGE ENVIRONMENTAL SERVICES	13,766,000	3/13/2025	The facility will submit a renewal application prior to September 14, 2024
LAD000777201	CHEMICAL WASTE MANAGEMENT (LAKE CHARLES)	606,838	Not Reported	Not Reported
MID048090633	US ECOLOGY WAYNE DISPOSAL	14,700,000	Not Reported	Not Reported
NVT330010000	US ECOLOGY NEVADA	6,928,587	Not Reported	Not Reported
OHD045243706	ENVIROSAFE SERVICES OF OHIO	199,500	9/30/2026	Renewal process will begin at least 1 year prior to expiration date and be submitted no later than 180 days prior to the expiration date
OKD065438376	CLEAN HARBORS LONE MOUNTAIN	2,484,430	4/1/2021	The current permit expired April 1, 2021, but remains in effect until such time as the new permit is issued. The renewal application was submitted in September 2020, more than 180 days prior to permit expiration.
ORD089452353	CHEMICAL WASTE MANAGEMENT OF THE NW	4,032,096	Not Reported	Not Reported
TXD069452340	US ECOLOGY TEXAS	8,805,848	Not Reported	Not Reported
TXD988088464	WASTE CONTROL SPECIALISTS	Not Available	Not Available	Not Available
UTD982598898	ENERGYSOLUTIONS CLIVE FACILITY	495,352	4/4/2013	EnergySolutions submitted a timely renewal application on October 5, 2012. The State of Utah is finalizing the renewed permit now.
UTD991301748	CLEAN HARBORS GRASSY MOUNTAIN	4,181,013	10/4/2033	Renewal application will be submitted by October 4, 2032, 1 year prior to expiration
	Total	**74,654,203**		
	Rounded Total	**74,000,000**		

[a] Information was obtained through limited consultations conducted in July-November 2024.

Exhibit A-4
Commercial Capacity Data for Metals Recovery [a]

Handler ID	Handler Name	Maximum Operational Commercial Hazardous Waste Management Capacity (Tons/Year)
ALD046481032	SANDERS LEAD COMPANY INCORPORATED	262,713 [d]
ALR000042754	STEEL DUST RECYCLING, LLC	240,000 [d]
AZ0000337360	VEOLIA ES TECHNICAL SOLUTIONS, LLC	500 [b]
CAD066233966	QUEMETCO INC	201,000 [d]
CAD069124717	GLENCORE RECYCLING LLC	1,313 [c]
CAD088504881	KINSBURSKY BROTHERS SUPPLY INC	25,371 [d]
FL0000207449	VEOLIA ES TECHNICAL SOLUTIONS LLC	800 [b]
ILD005121439	SIPI METALS CORP	25,000 [d]
ILD040891368	AMERICAN ZINC RECYCLING CORP	778,000 [d]
IN0000351387	LIGHTING RESOURCES INCORPORATED	1,265 [b]
IND000199653	QUEMETCO INCORPORATED	2,200 [d]
MAD980915755	COMPLETE RECYCLING SOLUTIONS LLC	175 [b]
MND006148092	GOPHER RESOURCE	130,000 [d]
MOD059200089	BUICK RESOURCE RECYCLING FACILITY LLC	224,000 [c]
OHR000034025	LAMPS INC DBA ENVIRONMENTAL RECYCLING	85 [b]
PA0000453084	BETHLEHEM APPARATUS CO INC	500 [b]
PAD002390961	BETHLEHEM APPARATUS CO INC	1,000 [b]
PAD002395887	AMERICAN ZINC RECYCLING CORP	184,920 [c]
PAD087561015	THE INTL METALS RECLAMATION CO INC	50,000 [d]
PAD987367216	AERC RECYCLING SOLUTIONS	83 [b]
SCR000771618	AMERICAN ZINC RECYCLING CORP	180,000 [d]
TND982144099	AMERICAN ZINC RECYCLING CORP.	100,000 [d]
WID988566543	VEOLIA ES TECHNICAL SOLUTIONS LLC	3,400 [b]
WIR000000356	WM MERCURY WASTE INC	2,000 [b]
	Total	**2,414,325**
	Rounded Total	**2,400,000**

[a] Exhibit was developed using readily available capacity data. The exhibit does not include a comprehensive list of commercial hazardous waste metals recovery facilities.

[b] Information was verified/obtained through limited consultations conducted in February-March 2016.

[c] RCRAInfo, Permit Module; data current as of December 2, 2019.

[d] Based on information available at company's web site or other readily available data sources (e.g., state agency or company websites, published literature).

Exhibit A-5
Commercial Capacity Data for All Other CAP Management Categories

CAP Management Category	Maximum Operational Commercial Hazardous Waste Management Capacity (Tons/Year) [a]
RECOVERY	
Organics Recovery	2,500,000
Inorganic Recovery	526,000 [b]
TREATMENT	
Fuel Blending	4,300,000
Wastewater Treatment	12,000,000 [c]
Sludge Treatment/ Stabilization/Encapsulation	8,100,000
DISPOSAL	
Deepwell or Underground Injection	3,300,000

[a] Unless otherwise noted, capacity estimate obtained from the EPA's *National Capacity Assessment Report: Capacity Planning Pursuant ·to CERCLA Section· 104(c)(9)* (i.e., the 1996 capacity assessment report), EPA530-R-95-016, p. 21, November 1996. This is the most recent estimate of national capacity for this CAP management category.

[b] Capacity estimate based on demand in 2011 for management of wastes using inorganics recovery technologies.

[c] Capacity estimate obtained from the 1996 capacity assessment report was decreased by 28,000,000 tons to account for the reduction in wastewater treatment capacity associated with the decision of DuPont Chamber Works to stop accepting wastewaters from outside companies.

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Appendix B
RCRA Federally-Defined Hazardous Waste Management Facilities

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RCRA Federally-Defined Hazardous Waste Management Facilities

This appendix lists facilities that managed RCRA federally-defined hazardous wastes commercially in 2021. These facilities comprise the capacity reported in the national assessment. The list includes Subtitle C permitted and interim status facilities, and RCRA-exempt facilities. Facilities identified on this list will not necessarily correspond to facilities currently operating and actively managing RCRA-regulated waste because some facilities may have opened or closed between·2021 and 2024.

The type of management at each facility is identified by CAP management category. Each CAP management category is comprised of a number of waste management technologies that are generally interchangeable for managing broad types of wastes (e.g., organics, inorganics including metals, and wastewaters), based on treatment performance. The CAP management categories are comprised of the following management method codes, as defined in the 2021 BR instructions and forms contained in U.S. Environmental Protection Agency's *RCRA Subtitle C Reporting Instructions and Forms: EPA Forms 8700-12, 8700-13 A/B, 8700-23 (OMB #2050-0024*).

RECOVERY

Metals Recovery

H010	Metals recovery including retorting, smelting, chemical, etc.
H011	Mercury recovery (include mercury retorting, bulb/lamp crushing and mercury vapor recovery, thermostat recovery, mercury from medical equipment recovery, mercury car switch recovery, etc.)
H015	Deployment/deactivation of airbag waste followed by metals recovery

Organics Recovery

H020	Solvents recovery (distillation, extraction, etc.)

Inorganics Recovery

H039	Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc. (specify in comments)

Energy Recovery

H050	Energy recovery at this site – used as fuel (includes on-site fuel blending before energy recovery; report only this code)

TREATMENT

Fuel Blending

H061	Fuel blending prior to energy recovery at another site (waste generated on-site or received from off-site)

Incineration

H040	Incineration – thermal destruction other than use as a fuel (includes any preparation prior to burning)
H041	Open burning/open detonation

Wastewater Treatment

H070	Chemical treatment (reduction/destruction/oxidation/precipitation); do not include immediate treatment in an exempt wastewater treatment unit with discharge to a NPDES-POTW (unless required by State)
H081	Biological treatment; do not include immediate treatment in an exempted wastewater treatment unit with discharge to a NPDES-POTW (unless required by State)
H100	Physical treatment only (adsorption/absorption/separation/stripping/dewatering); do not include immediate treatment in an exempted wastewater treatment unit with discharge to a NPDES-POTW (unless required by State)

Wastewater Treatment (continued)

H120	Combination of chemical, biological, and/or physical treatment; do not include immediate treatment in an exempted wastewater treatment unit with discharge to a NPDES-POTW (unless required by State)
H121	Neutralization only (no other treatment)
H122	Evaporation (as the major component of treatment; not reportable as H070, H081, H100 or H120)
H129	Other treatment that does not include onsite disposal (specify in comments)
H130	Surface Impoundment that will be closed as a landfill (with prior treatment and/or stabilization meeting LDR treatment standard)
H135	Discharge to sewer/POTW or NPDES with prior management (e.g., storage or transported prior to discharge to POTW or by NPDES)

Sludge Treatment/ Stabilization/Encapsulation

H110	Stabilization prior to land disposal at another site (encapsulation/stabilization/fixation)
H112	Macro-encapsulation prior to disposal at another site (Legacy Management Method)

DISPOSAL

Land Treatment or Application

H131	Land treatment or application (with any prior treatment and/or stabilization)

Landfill

H132	Landfill (with prior treatment and/or stabilization)

Deepwell or Underground Injection

H134	Deepwell or underground injection (with or without treatment; this waste was counted as hazardous waste)

Transfer/Storage

H141	The site receiving this waste stored/bulked and transferred the waste with no reclamation, recovery, destruction, treatment or disposal at that site. [Do not use this code in Item 1.D (source code G25) or Item 2 (On-site Management) of Form GM]. For Form WR, linked to source code G61 on Form GM.

Exhibit B-1
Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
AKD000643239	HILCORP NORTH SLOPE PRUDHOE BAY UNIT	X										X
AKD991281023	CONOCOPHILLIPS ALASKA INC - KUPARUK OIL FIELD							X				
AL3640090004	TVA ENVIRONMENTAL RESEARCH CENTER		X									
AL7210020742	U.S. ARMY REDSTONE ARSENAL						X					
ALD008185407	HUXFORD POLE & TIMBER COMPANY INC.							X				
ALD031490501	BALDWIN POLE & PILING COMPANY., INC.							X				
ALD046481032	SANDERS LEAD COMPANY, INC.										X	
ALD052065117	CONTINENTAL AEROSPACE TECHNOLOGIES, INC.										X	
ALD058221326	ALABAMA STATE PORT AUTHORITY (AWTC SITE 3)							X				
ALD095687786	LP LOCKHART							X				
ALR000013128	GLASSFORMS INC BLDGS# 1-4		X									
ALR000034207	MOBIS ALABAMA LLC							X				
AR0000064311	AMMUNITION OPERATIONS LLC						X					
AR0213820707	PINE BLUFF ARSENAL						X					
ARD005072079	LACROIX PRECISION OPTICS		X									
ARD035486745	SINES BODY SHOP INC.		X									
ARD043195429	LANXESS CORPORATION											X
ARD055602098	CRIDER AIRCRAFT PAINTING, INC.							X				
ARD075669416	ARKANSAS CHILDREN'S HOSPITAL		X									
ARD077389393	SLOAN VALVE COMPANY										X	
ARD082577602	GRACE MANUFACTURING, INC.							X				
ARD089234884	FUTUREFUEL CHEMICAL COMPANY				X		X					
ARD091688283	AEROJET ROCKETDYNE, INC.						X					

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
ARD091691261	ARKANSAS STEEL ASSOCIATES L.L.C.	X										
ARD092923184	THE BRYCE COMPANY, LLC		X									
ARD982286874	THE DOW CHEMICAL COMPANY											X
ARR000013664	INDUSTRIAL IRON WORKS, INC.		X									
ARR000017574	CHEMOURS EL DORADO PLANT							X				
ARR000021774	STRAND COMPOSITES, LLC		X									
AZ4570024055	DAVIS-MONTHAN AFB							X				
AZ5213820991	US ARMY GARRISON YUMA PROVING GROUND						X					
AZ7213820635	CAMP NAVAJO						X					
AZD041456872	PAS TECHNOLOGIES INC							X				
AZD043840479	LINDE ELECTRONICS & SPECIALTY GASES							X				
AZD060624251	FREEPORT-MCMORAN - MIAMI							X				
AZD980816920	NXP USA, INC. - CHANDLER							X				
AZD981626617	MAGELLAN AEROSPACE GLENDALE, INC.							X				
AZD981669989	GOLD TECH INDUSTRIES							X				
AZD982435166	PRINTPACK INC		X									
AZR000504118	BRIGHT INTERNATIONAL							X				
CA0000883322	A AND G ELECTROPOLISH							X				
CA0001037902	SIERRA ALUMINUM, A DIVISION OF SAMUEL, SON & CO. (USA) INC							X				
CA1570024504	EDWARDS AIR FORCE BASE						X					
CA2170023152	NAVAL AIR WEAPONS STATION CHINA LAKE						X					
CA2890012584	LAWRENCE LIVERMORE NATIONAL LABORATORY							X	X			
CA8210020436	U.S. ARMY GARRISON - FORT HUNTER LIGGETT			X								

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
CA9570025149	DEPT OF AIR FORCE VANDENBERG AFB							X				
CAC003062389	PENCCO							X				
CAD000086686	VACCO INDUSTRIES							X				
CAD008252157	ARMTEC DEFENSE PRODUCTS COMPANY							X				
CAD008330318	RAMCAR BATTERIES INC							X				
CAD008479479	ANODYNE INC							X				
CAD008506065	QUAKER CITY PLATING & SILVERSMITH							X				
CAD009158932	GENERAL DYNAMICS - NASSCO		X									
CAD009220898	PACIFIC SCIENTIFIC ENERGETIC MATERIALS CO						X	X				
CAD009679077	LOCKHEED MARTIN AERONAUTICS COMPANY							X				
CAD021774559	A B & I	X										
CAD042237735	REID METAL FINISHING							X				
CAD047896097	KYOCERA INTERNATIONAL INC							X				
CAD059498428	QUALITEK INC DBA WESTAK	X						X				
CAD060895927	ACCURATE ANODIZING, INC							X			X	
CAD072263494	THE PROCTER & GAMBLE PAPER PRODUCTS CO						X					
CAD076528678	CORTEVA AGRISCIENCE LLC						X					
CAD077966349	PACIFIC GAS & ELECTRIC / DIABLO CANYON POWER PLANT							X				
CAD093365435	THE BOEING CO-CANOGA PARK							X				
CAD980818488	EPZ, INC.							X				
CAD981399959	ELCON PRECISION LLC							X				
CAD981420821	ANALOG DEVICES, INC							X				
CAD981462377	GOODRICH CORP							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
CAD981673809	AVNEX SURFACE FINISHING INC							X				
CAD982030678	SIERRA ALUMINUM, A DIVISION OF SAMUEL, SON & CO. (USA) INC.							X				
CAD983652835	EXCELLO CIRCUITS, INC.							X				
CAL000162258	FREEBERG INDUSTRIAL FABRICATION CORPORATION		X									
CAL000205335	PACIFIC COAST PRODUCERS DISTRIBUTION CNT							X				
CAL000329230	STATE ROOFING SYSTEM			X								
CAL000403287	ATTAN RECYCLING CORP							X				
CAR000009878	SAFE PLATING INC							X				
CAR000017277	HOLOGIC INC							X				
CAR000045997	FENDER MUSICAL INSTRUMENTS CORP		X									
CAR000059204	TAYLOR GUITARS		X									
CAR000077388	MERIT ALUMINUM, INC			X								
CAR000078238	SOLARSILICON RECYCLING SERVICES LLC							X				
CAR000113274	HUGHES CIRCUITS INC	X										
CAR000155887	US CIRCUIT INC							X				
CAR000162487	CODEXIS INC							X				
CAR000205997	ARCADIA INC		X								X	
CAR000249938	LABORATORY CORP OF AMERICA		X									
CAR000256677	ELITE METAL FINISHING, LLC							X				
CAR000270330	ALLIANCE FINISHING & MANUFACTURING			X								
CAR000276204	C&R PLATING INC							X				
CAT080010044	INTERPLASTIC CORPORATION							X				
CO2210020150	US ARMY - FORT CARSON							X				

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
COD001704790	LOCKHEED MARTIN SPACE							X				
CTD001139096	THE HAR-CONN CHROME COMPANY							X				
CTD001145341	HAMILTON SUNDSTRAND CORP							X				
CTD001154558	METAL FINISHING TECHNOLOGIES LLC							X				
CTD001159730	AMERICAS STYRENICS LLC ALLYN'S POINT STYRENICS PLANT				X							
CTD001449602	SANDVIK WIRE AND HEATING TECH							X				
CTD010174613	PRAXAIR SURFACE TECHNOLOGIES INC							X				
CTD063397285	ULBRICH WIRE INC							X				
CTD983875436	DIMENSION-POLYANT INC		X									
CTR000003236	YALE UNIVERSITY SCIENCE/CENTRAL CAMPUS		X									
CTR000506527	BIC CONSUMER PRODUCTS MFG CO INC								X			
DED021957444	JUSTIN TANKS, LLC		X									
DED046554150	ROHM AND HAAS ELECTRONIC MATERIALS CMP, LLC							X				
DED069876795	PRINTPACK INC		X									
DED980537781	HANDYTUBE CORPORATION							X				
FL6800014585	JOHN F KENNEDY SPACE CENTER		X					X				
FL7570024375	HURLBURT FIELD AFB									X		
FL8570024366	EGLIN AIR FORCE BASE						X					
FLD000825133	ESCALADE SPORTS		X									
FLD004087631	HENEFELT PRECISION PRODUCTS, INC							X				
FLD004092839	ENVIROFOCUS TECHNOLOGIES LLC	X						X				
FLD046855086	PALL AEROPOWER CORPORATION					X						
FLD047096524	ST MARKS POWDER INC		X				X					

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
FLD047966593	NAMMO PERRY INC.						X					
FLD049758725	REGAL MARINE INDUSTRIES INC		X									
FLD061432266	PIERCE MANUFACTURING FLORIDA DIV		X									
FLD084717545	MOSAIC FERTILIZER LLC NEW WALES FACILITY							X				
FLD092980150	MOSAIC FERTILIZER LLC SOUTH PIERCE FACILITY							X				
FLD980729016	JOHN BEAN TECHNOLOGIES CORP		X									
FLD982075756	LINVATEC CORPORATION							X				
FLD982160723	ALIGN PRECISION							X				
FLR000011734	TAMPA STEEL ERECTING CO		X									
FLR000068841	RJ DOUGHERTY LLC DBA EVERGLADES BOATS		X									
FLR000164376	EVERGLADES BOATS		X									
GA0001405059	AMCOR TOBACCO PACKAGING ATLANTA		X									
GA0002265148	EVERLUBE PRODUCTS		X									
GA4170090001	NAVAL SUBMARINE BASE - KINGS BAY						X	X				
GAD003273224	BONNELL ALUMINUM, INC.							X				
GAD003275468	CHEMICAL PRODUCTS CORPORATION							X				
GAD004149951	CHAPARRAL BOATS INC		X									
GAD057293250	BEAVER MANUFACTURING COMPANY, INC.							X				
GAD063152573	SAFT AMERICA INC							X				
GAD066477142	COTTRELL INC		X									
GAD084823301	POLYNT COMPOSITES USA, INC							X				
GAD981261704	CENTEK INDUSTRIES INC		X									
GAD981264880	YAMAHA MOTOR MANUFACTURING CORP		X									

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
GAD984310755	TRANSCONTINENTAL ALBANY		X									
GAR000030296	HL-A CO., INC.		X									
GAR000042747	LX HAUSYS AMERICA INC		X									
GAR000051110	WINPAK FILMS INC		X									
GAR000075085	SOUTHERN NUCLEAR - PLANT VOGTLE 3 & 4 CONSTRUCTION			X								
GAR000082230	ABC COMPOUNDING CO INC							X				
GU6571999519	U.S.A.F. ANDERSEN AIR FORCE BASE						X					
HID056786395	PAR HAWAII REFINING, LLC							X				
IAD000222992	GEATER MACHINING AND MANUFACTURING		X									
IAD005273594	BAYER CROPSCIENCE LP							X				
IAD984568527	GOMACO CORPORATION PLANT 2		X									
IAR000005710	AMERICAN PACKAGING CORPORATION		X									
IAR000007377	SIEGWERK USA COMPANY		X									
IAR000008227	PELLA CORPORATION - SIOUX CENTER OPERATION		X									
IAR000518142	AXALTA COATING SYSTEMS USA LLC - FORT MADISON PLANT							X				
IL0000487694	CHEM PROCESSING, INC		X									
ILD000802819	WIELAND ROLLED PRODUCTS NORTH AMERICA							X				
ILD000805812	PEORIA DISPOSAL CO							X				
ILD042075333	CABOT CORP											X
ILD069998078	ARKEMA COATING RESINS							X				
ILD980700751	BFI DAVIS JUNCTION LANDFILL							X				
ILD980795561	ABBOTT LABORATORIES							X				
ILD982624777	DYNO NOBEL INC						X					

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
ILR000066886	LANXESS CORPORATION							X				
IN5170023498	US NAVAL SUPPORT ACTIVITY CRANE DIVISION						X					
IND000807107	VERTELLUS INTEGRATED PYRIDINES LLC				X							
IND003913423	CLEVELAND-CLIFFS BURNS HARBOR LLC											X
IND004939229	INDUSTRIAL DIELECTRICS INCORPORATED								X			
IND006376362	SABIC INNOVATIVE PLASTICS MOUNT VERNON LLC				X							
IND037585353	PROEDGE INC		X									
IND074329764	IMAGINEERING ENTERPRISES, INC			X								
IND088738620	MOLDING PRODUCTS LLC		X									
IND094577095	JP INCORPORATED		X									
IND147933212	PATRICK INDUSTRIES INCORPORATED DBA MIDDLEBURY HARDWOOD PRODUCTS		X									
IND982602617	THUNDERBIRD PRODUCTS CORPORATION		X									
IND984873257	TOYOTA MATERIAL HANDLING INC.		X									
IND984873265	PATRICK INDUSTRIES INCORPORATED DBA BETTER WAY PRODUCTS		X									
IND985012855	IDEMITSU LUBRICANTS AMERICA		X									
INR000002402	PATRICK INDUSTRIES INCORPORATED DBA ADORN		X									
INR000007328	HEIDTMAN STEEL PRODUCTS INC			X								
INR000010363	PRO CUSTOM PAINTING INCORPORATED		X									
INR000012575	PATRICK INDUSTRIES INCORPORATED DBA BETTER WAY PRODUCTS		X									
INR000023697	INSITUFORM TECHNOLOGIES LLC							X				
INR000025338	PBTT CORPORATION							X			X	
INR000104919	CRANE COMPOSITES		X									
INR000108308	BEST METAL FINISHING INCORPORATED							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
INR000135848	STAPLES THE OFFICE SUPERSTORE EAST LLC							X				
INR000136713	FOUR WOODS LAMINATING INCORPORATED		X									
INR000137612	SMART LLC DBA SMART CABINETRY		X									
KS0000205856	COBALT BOATS LLC-NORTH		X									
KS0001012509	R D HENRY AND COMPANY INC		X									
KSD007237746	EVONIK CORPORATION				X							
KSD007241185	METAL FINISHING COMPANY INC		X									
KSD007482029	OCCIDENTAL CHEMICAL CORPORATION											X
KSD052296274	FUTAMURA USA INC		X									
KSD054080148	TRANSCONTINENTAL ROBBIE INC		X									
KSD056577810	THE SHERWIN WILLIAMS COMPANY		X									
KSD062721956	PACKAGING PRODUCTS CORPORATION LLC		X									
KSD073323081	3P PROCESSING LLC		X									
KSD980687958	WILKO PAINT INC		X									
KSD980852669	UNIVERSITY OF KANSAS H W A F		X									
KSD984972992	PACE ANALYTICAL SERVICES LLC							X				
KSD990874471	CATERPILLAR WORK TOOLS INC		X									
KSR000001404	NAZDAR/KC COATINGS		X									
KSR000001743	O A BOTH CORPORATION DBA SCHLENK METALLIC PIGMENTS		X									
KSR000003137	HI-LO INDUSTRIES INC		X									
KSR000016931	CRESTWOOD INC		X									
KSR000506394	KBK INDUSTRIES LLC NORTH FAC		X									
KSR000511964	DAY & ZIMMERMANN KANSAS LLC						X					

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		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
KSR000512798	HESS SERVICES INC		X									
KSR106386887	GREAT PLAINS MANUFACTURING INC ABILENE WEST		X									
KY0000940056	AKEBONO BRAKE CORPORATION DBA AKEBONO BRAKE, GLASGOW PLANT							X				
KY8213820105	BLUE GRASS ARMY DEPOT						X					
KYD000615898	ASHLAND INC							X				
KYD000623009	AMG ALUMINUM NORTH AMERICA, LLC.							X				
KYD006370159	ARKEMA INC						X	X				
KYD006390017	ROHM AND HAAS - LOUISVILLE PLANT				X							
KYD006396246	MONUMENT CHEMICAL KENTUCKY, LLC							X				
KYD026007450	MOUSER CUSTOM CABINETS, LLC		X									
KYD042943985	DOW CORNING CORPORATION							X				
KYD047812854	CRANE COMPOSITES								X			
KYD066051913	INTERPLASTIC CORPORATION - FORT WRIGHT PLANT							X				
KYD084758069	AVANTOR PERFORMANCE MATERIALS, LLC							X				
KYD985114966	OWENSBORO SPECIALTY POLYMERS, INC.							X				
KYR000000216	TAUBENSEE STEEL & WIRE CO.							X				
KYR000032102	ENSIGN-BICKFORD AEROSPACE & DEFENSE COMPANY							X				
KYR000033860	PELLA CORPORATION - MURRAY OPERATIONS							X				
KYR000034207	DAICEL SAFETY SYSTEMS AMERICA LLC							X				
LAD001890367	DUPONT SPECIALTY PRODUCTS USA, LLC - DUPONT PONTCHARTRAIN SITE				X							
LAD008086506	EAGLE US 2 LLC						X					
LAD008187080	THE DOW CHEMICAL COMPANY						X					
LAD008213191	RUBICON LLC				X							X

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LAD020597597	ANGUS CHEMICAL COMPANY				X							X
LAD040776809	BASF GEISMAR SITE				X		X					
LAD050901669	NALCO CO - GARYVILLE FACILITY							X				
LAD057117434	AXIALL, PLAQUEMINE				X							
LAD081419418	SHINTECH LOUISIANA LLC - SHINTECH PLAQUEMINE PLANT						X					
LAD092681824	OCCIDENTAL CHEMICAL CORPORATION						X					
LAD985192764	INNOPHOS, INC.											X
LAR000009415	DENKA PERFORMANCE ELASTOMER LLC			X								X
LAR000041087	SASOL CHEMICALS (USA) LLC - LAKE CHARLES CHEMICAL COMPLEX							X				
LAR000070987	ARKEMA ST. CHARLES							X				
LAR000086074	BLUE CUBE OPERATIONS LLC						X					
LAR000101851	NUTRITION & BIOSCIENCES USA 1 LLC - PLAQUEMINE METHOCEL						X					
MAD001136035	FLEXCON CO INC		X									
MAD001403104	OLIN CHEMICAL SUPERFUND SITE							X				
MAD001425594	MASSACHUSETTS INSTITUTE OF TECHNOLOGY		X									
MAD054430095	POLY METAL FINISHING INC		X									
MAD092200153	FORMER NYPRO INC						X				X	
MAD980672216	VALLEY PLATING INC			X				X				
MAD985288265	BOSTON UNIVERSITY		X									
MAR000009605	ISP FREETOWN FINE CHEMICALS INC		X									
MAR000502559	STELLAR INDUSTRIES CORPORATION		X									
MAR000561506	CHASM ADVANCED MATERIALS INC			X								
MD3210021355	U.S. ARMY GARRISON, ABERDEEN PROVING GROUND						X	X				

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MD6150004095	NATIONAL INSTITUTES OF HEALTH							X				
MDD003062213	ALMAG PLATING CORPORATION							X				
MDD003067121	ALLIANT TECHSYSTEMS OPERATIONS LLC - ELKTON						X					
MDD042183566	NORTHROP GRUMMAN SYSTEMS CORPORATION		X									
MDD046279311	FORMER APPLIANCE PARK EAST FACILITY							X				
MDD077410538	TNEMEC COMPANY, INC.		X									
MDD985386143	MID-ATLANTIC FINISHING CORP.							X				
MDR000522320	MANN-PAK, INC		X									
MDR000527659	ACADEMI TRAINING CENTER, LLC							X				
MED985467562	PRAXAIR SURFACE TECHNOLOGIES, INC.							X				
MER000503813	DAHL-CHASE DIAGNOSTIC SERVICES		X									
MER000506741	NORTHEAST PACKAGING COMPANY		X									
MID000820381	PHARMACIA & UPJOHN COMPANY LLC											X
MID006020275	THIERICA INC		X									
MID082767591	MICHIGAN SEAMLESS TUBE LLC							X				
MID118740240	YANFENG GLOBAL AUTOMOTIVE INTERIORS -SOUTHVIEW		X									
MID980614267	3M COMPANY							X				
MID985650969	DUNCAN AVIATION		X									
MIK131445268	DNR INC							X				
MIK711191130	RICHARD-ALLAN SCIENTIFIC LLC							X				
MIK718692981	AXIUM GROUP LLC		X									
MIK853635670	LAB TECH INDUSTRIES							X				
MIT270013113	GENERAL FORMULATIONS INC		X									

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MND000272146	METHODIST HOSPITAL		X									
MND006151336	INTERPLASTIC CORPORATION - MINNEAPOLIS							X				
MND006156590	FEDERAL CARTRIDGE CO						X	X				
MND006167720	WATER GREMLIN CO INC			X								
MND006172621	CO-OPERATIVE PLATING COMPANY							X				
MND006248868	NORTHLAND ALUMINUM PRODUCTS, INC		X									
MND006253694	ROBERTS AUTOMATIC PRODUCTS			X								
MND006447585	CNH INDUSTRIAL AMERICA LLC		X									
MND006454854	DURA SUPREME, INC.		X									
MND006478523	DOUGLAS CORPORATION, PLATING DIVISION							X				
MND022772008	ESSENTIA HEALTH - DULUTH							X				
MND037335072	BECKMAN COULTER INC. 1000 LAKE HAZELTINE							X				
MND071498828	U OF M MEDICAL CENTER - RIVERSIDE CAMPS		X									
MND071767222	REGIONS HOSPITAL							X				
MND078689619	CHILDRENS HOSPITALS AND CLINICS OF MN	X	X					X				
MND132405473	HENNEPIN HEALTHCARE SYSTEMS - HCMC		X					X				
MND980613822	U OF M - SAINT PAUL CAMPUS		X									
MND980824890	BAE SYSTEMS (OLD - FMC)							X				
MND982426488	HB FULLER COMPANY		X					X				
MND982627259	METRO METALS CORP							X				
MND985677889	ROSEMOUNT INC							X				
MND985680206	TSS DELANO		X									
MND985697598	NAHAN PRINTING INC - ST CLOUD		X									

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
MND985767482	ECO FINISHING INC.							X				
MND990730673	BRUNSWICK NEW YORK MILLS OPERATIONS		X									
MNR000004143	4FRONT TECHNOLOGY AND OFFICE CAMPUS							X				
MNR000023200	SYNOVIS LIFE TECHNOLOGIES INC - SUB OF BAXTER INTL							X				
MNR000054239	CHILDREN`S HOSPITALS AND CLINICS OF MN	X						X				
MNR000100545	MIDWEST FINISHING, INC.	X										
MNR000103945	SUPERIOR DRIVE SUPPORT CENTER							X				
MNR000104422	INDUSTRIAL FINISHING SERVICES - PERHAM		X									
MNR000114652	MEDTRONIC APV							X				
MNS000101865	BAYER BUILT WOODWORKS, INC.		X									
MNS000118513	TECH-ETCH, INC							X				
MNS000204545	MARVIN BUILDING							X				
MO0000032581	ADVANCED INDUSTRIES LLC		X									
MO4213820489	LAKE CITY ARMY AMMUNITION PLANT						X	X				
MOD000687392	AMEREN MISSOURI CALLAWAY ENERGY CENTER							X				
MOD000829705	FRONT STREET REMEDIAL ACTION CORP							X				
MOD006274732	ELANTAS PDG INC		X									
MOD056389828	BAYER CROPSCIENCE LP						X	X				
MOD981712425	LHB INDUSTRIES		X									
MOD985775527	MERRILL IRON & STEEL INC		X									
MSD008186587	ROHM AND HAAS CHEMICALS, LLC							X				
MSD021019914	AMERICAN WOOD - DIVISION OF POWE TIMBER							X				
MSD033417031	FIRST CHEMICAL CORPORATION						X					

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
MSD048320030	MUELLER COPPER TUBE COMPANY, INC		X									
MSD063947469	KIRK AUTO COMPANY		X									
MSD096046792	THE CHEMOURS COMPANY FC, LLC											X
MSD096071881	TRULITE GLASS AND ALUMINUM SOLUTIONS		X									
MSD980729198	WOOD PRESERVING, INC							X				
MSD982120677	HEADRICK SIGN COMPANY		X									
MSD985967025	NEW WAY TRUCKS		X									
MSD985980309	SULLIVAN FORD		X									
MSD991277575	DREXEL CHEMICAL COMPANY					X						
MSR000103507	BALDWIN POLE MISSISSIPPI, L.L.C.							X				
MSR000107136	B AND D PLASTIC LLC		X									
NC0991302719	AMCOR TOBACCO PACKAGING REIDSVILLE		X									
NCD000616763	HK RESEARCH CORPORATION		X									
NCD000813519	DUKE UNIVERSITY							X				
NCD003214319	THE SHERWIN WILLIAMS MANUFACTURING COMPANY		X									
NCD041747775	ST JOHNS PACKAGING (USA) LLC		X									
NCD042091975	MALLINCKRODT RALEIGH PHARMACEUTICAL PLANT				X			X				
NCD071561864	THE SHERWIN-WILLIAMS COMPANY		X									
NCD986166361	DAY INTERNATIONAL		X									
NCD986189801	IMAFLEX USA		X									
NCR000008920	AMERICAN EMERGENCY VEHICLES		X									
NCR000135988	TRIUMPH INSULATION SYSTEMS, LLC		X									
NCR000143099	POWERSECURE MANUFACTURING INC.								X			

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
NCR000145284	LATHAM POOL PRODUCTS, INC - NC								X			
NCR000150235	TRINITY MANUFACTURING INC							X				
NCR000166983	AMERICAN EMERGENCY VEHICLES		X									
NCR000179978	JETSTREAM AVIATION, LLC.							X				
NDD000690594	DAKOTA GASIFICATION COMPANY - GREAT PLAINS SYNFUELS PLANT				X							
NDD006175467	TESORO MANDAN REFINERY							X				
NDD986267888	SUMMERS MANUFACTURING COMPANY INC. - DEVILS LAKE		X									
NED000766808	UNIVERSITY OF NEBRASKA							X				
NED007258338	CONCRETE EQUIPMENT COMPANY, INC.		X									
NED043534635	GENERAL DYNAMICS-OTS, INC.		X									
NED980971733	DUNCAN AVIATION, INC.		X									
NER000502443	LABORATORY CORPORATION OF AMERICA		X									
NER000506261	AGILITY CYLINDERS LLC.		X									
NHD002576817	AAVID BOYD CORP							X				
NHD073981250	SALEM DEPOT INTERSECTION IMPROVEMENTS PROJ							X				
NHD510224322	SEACOAST PATHOLOGY INC		X									
NJ3210020704	US ARMY-PICATINNY ARSENAL						X					
NJD002012995	PAN TECHNOLOGY INC		X									
NJD002158418	LAMART CORP		X									
NJD980208946	J JOSEPHSON INC		X									
NJD980753875	SOLVAY SPECIALTY POLYMERS USA LLC						X					
NJD980785257	JET CARE INTERNATIONAL INC		X									
NJD980787345	LALLYPAK INC		X									

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
NJD982275737	KULITE SEMICONDUCTOR PRODUCTS INC							X				
NJR000062190	KOBO PRODUCTS INC		X									
NM0890010515	LOS ALAMOS NATIONAL LABORATORY						X					
NM8800019434	NASA JSC WHITE SANDS TEST FACILITY							X				
NMD980744551	CTS ELECTRONIC COMPONENTS, INC.							X				
NV1210090006	HAWTHORNE ARMY DEPOT						X					
NVD986774354	GP&C OPERATIONS WEST		X									
NVR000084996	ERICKSON INTERNATIONAL LLC		X									
NVR000091819	NEVADA ENVIRONMENTAL RESPONSE TRUST							X				
NY0000146126	LOCKHEED MARTIN RMS - OWEGO							X				
NY0000665216	NORTH EAST FINISHING CO INC							X				
NY0000926436	ORTHO CLINICAL DIAGNOSTICS							X				
NY6890008992	USDOE KNOLLS ATOMIC POWER LABORATORY - KNOLLS LABORATORY							X				
NY7213820940	WATERVLIET ARSENAL							X				
NY8210020915	US ARMY GARRISON - WEST POINT							X				
NYD000339176	DUNMORE INTERNATIONAL CORPORATION		X									
NYD000632083	AURUBIS BUFFALO INC							X				
NYD000688606	ANHEUSER-BUSCH INC							X				
NYD000706275	CON EDISON - 59TH STREET GENERATING STAT							X				
NYD000799239	SYRACUSE UNIVERSITY - MAIN CAMPUS QUAD							X				
NYD000810986	CORNELL UNIVERSITY ENVIRONMENTAL HEALTH & SAFETY		X					X				
NYD000818823	WELCH ALLYN							X				
NYD000824482	OCCIDENTAL CHEMICAL CORPORATION -NIAGARA PLANT							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
NYD000831644	HOOKER - HYDE PARK							X				
NYD001827633	AMPHENOL CORP							X				
NYD002040277	GREAT NECK SAW MANUFACTURING							X				
NYD002043396	PALL TRINITY MICRO DIV PALL CORP							X				
NYD002056943	JOHN LAROCCA & JOHN INC DBA E C SUMEREAU & SONS INC							X				
NYD002066777	AMSTERDAM PRINTING & LITHO INC							X				
NYD002080034	MPM SILICONES LLC						X	X				
NYD002100568	FLEXO TRANSPARENT LLC		X									
NYD002103216	DUREZ CORP						X					
NYD002106938	DUREZ NORTH TONAWANDA OCCIDENTAL CHEMICAL CORP							X				
NYD002114924	HOPES WINDOWS INC		X									
NYD002115152	JAMESTOWN ELECTRO PLATING WORKS INC							X				
NYD002116184	CANDLELIGHT CABINETRY INC		X									
NYD002123461	OLIN CORPORATION - CHLOR ALKALI PRODUCTS							X				
NYD002207256	GENERAL PLATING LLC							X				
NYD002211324	XEROX CORPORATION							X				
NYD002214484	MARKIN TUBING							X				
NYD002215234	GM COMPONENTS HOLDINGS LLC							X				
NYD002217834	G W LISK COMPANY INC							X				
NYD002218436	ARKEMA INC GENESEO FACILITY							X				
NYD002220804	ARCH CHEMICALS INC							X				
NYD002221919	JMT PROPERTIES INC							X				
NYD002227296	INDIUM CORPORATION OF AMERICA							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
NYD002227528	IWG NEST LLC DBA OWL WIRE & CABLE							X				
NYD002228625	EMERSUB 15 LLC							X				
NYD002229029	MULTI-COLOR CORPORATION		X									
NYD002230902	BRISTOL-MYERS SQUIBB COMPANY							X				
NYD002233856	RAYMOND CORP THE		X									
NYD002234763	EVANS CHEMETICS LP							X				
NYD002238582	ANOPLATE CORPORATION							X				
NYD002240638	REMARMS LLC							X				
NYD002241982	HADCO-A WHOLLY OWNED SUBSIDIARY OF SANMINA-SCI							X				
NYD002249613	UTICA METAL PRODUCTS INC							X				
NYD002430742	RENSSELAER POLYTECHNIC INSTITUTE							X				
NYD003939592	CON EDISON EAST RIVER GENERATING STATION							X				
NYD003939824	CON EDISON - 74TH STREET GENERATING STA							X				
NYD003959251	KEYMARK CORPORATION		X					X				
NYD003980216	NOVELIS CORP SITE #7-38-015							X				
NYD013415849	ELECTRONIC DEVICES INC							X	X			
NYD030231153	UNITED SILICONE INC							X				
NYD030485288	REVERE SMELTING & REFINING LLC							X				
NYD040464315	STONY BROOK UNIVERSITY		X									
NYD048779326	COLUMBIA UNIVERSITY PHYS & SURG		X									
NYD055961361	CROSMAN CORPORATION							X				
NYD059385120	LOCKHEED MARTIN CORPORATION							X				
NYD065939902	MILL MAX MFG CORP		X					X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
NYD067919183	CORNING INC SULLIVAN PARK		X									
NYD068296839	JOS LOWENSTEIN & SONS INC							X				
NYD071586127	REVERE COPPER PRODUCTS INC							X				
NYD074042292	BUFFALO GENERAL MEDICAL CENTER-KALEIDA HEALTH			X								
NYD080336241	CECOS INTERNATIONAL INC							X				
NYD080480734	IBM CORP							X				
NYD082780446	GENERAL REFINING & SMELTI	X										
NYD084006741	IBM CORPORATION THOMAS J WATSON RESEARCH CENTER							X				
NYD099333858	PRECIOUS PLATE INC	X						X				
NYD108618745	IIMAK		X									
NYD144687225	WESTCHESTER COUNTY AIRPORT							X				
NYD157387770	TEST AMERICA LABORATORIES - BUFFALO							X				
NYD175773779	VANDEMARK CHEMICAL INC							X				
NYD980536288	CHEMOURS NECCO PARK							X				
NYD980593024	INTERNATIONAL WIRE GROUP INC-PRESTON HILL RD FACILITY	X										
NYD980642656	DEWEY LOEFFEL LANDFILL							X				
NYD980651210	KNOWLES CAZENOVIA							X				
NYD980769830	ROCHESTER OVERNIGHT PLATING							X				
NYD980779540	WEST VALLEY DEMONSTRATION PROJECT							X				
NYD980790141	TRANSCONTINENTAL ULTRA FLEX INC		X									
NYD982534190	PROAMPAC CORPORATION		X									
NYD982718777	GLASS FAB INC							X				
NYD982725699	LD MCCAULEY LLC							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
NYD982736423	NAP INDUSTRIES		X									
NYD982796906	STAUFFER MANAGEMENT COMPANY LLC							X				
NYD990774200	UNITED STATES CHROME CORP OF NEW YORK							X				
NYR000046094	ESSEX SPECIALTY PRODUCTS LLC							X				
NYR000054411	ROWE INDUSTRIES FORMERLY - SUPERFUND SITE							X				
NYR000060459	GENERAL ELECTRIC CO-98 LYMAN ST							X				
NYR000096438	OCCIDENTAL CHEMICAL CORPORATION - S AREA							X				
NYR000099838	VULCRAFT OF NEW YORK INC							X				
NYR000105718	DUNKIRK SPECIALTY STEEL LLC							X				
NYR000110700	UMICORE ELECTRICAL USA INC							X				
NYR000122218	ASTRO ELECTROPLATING INC							X				
NYR000130427	IWG NEST LLC DBA OWL WIRE & CABLE							X				
NYR000131813	JABIL INC							X				
NYR000137034	HAMBURG FINISHING WORKS							X				
NYR000138727	AMCOR FLEXIBLES NORTH AMERICA INC - EDGEWOOD		X									
NYR000143909	IWG NEST LLC DBA OWL WIRE & CABLE							X				
NYR000145177	CARESTREAM HEALTH INC INTENSIFYING SCREENS & CASSETTES - B-117							X				
NYR000145680	IWG OMEGA WIRE INC - SHERRILL OPERATIONS							X				
NYR000179887	GLOBALFOUNDRIES							X				
NYR000184986	ROCHESTER SILVER WORKS LLC							X				
NYR000185694	ROCHESTER MIDLAND CORP							X				
NYR000188425	ALADDIN PACKAGING LLC		X									
NYR000218974	GLOBALFOUNDRIES EAST FISHKILL FACILITY							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
NYR000232702	NEWCUT BY FATHOM							X				
NYR000246025	ARCONIC MASSENA LLC							X				
OH7890008983	US DOE PORTSMOUTH GASEOUS DIFFUSION PLANT							X				
OHD000723452	PLATING TECHNOLOGY INC							X				
OHD004172565	THE LUBRIZOL CORPORATION							X				
OHD004172623	THE LUBRIZOL CORPORATION						X					
OHD004234480	CLEVELAND CLIFFS STEEL CORP											X
OHD004236170	STANDARDAERO COMPONENT SERVICES INC		X									
OHD004284188	GFS CHEMICALS INC							X				
OHD004293775	AUSTIN POWDER CO						X					
OHD004465100	TIMKENSTEEL CORP	X										
OHD007901598	BATTELLE MEMORIAL INSTITUTE							X				
OHD017730458	CLEVELAND CLINIC FOUNDATION		X									
OHD034909358	STANLEY ELECTRIC US CO INC	X						X				
OHD041604729	CHROMAFLO TECHNOLOGIES			X								
OHD042157644	INEOS NITRILES USA LLC											X
OHD046202602	UNITED INITIATORS INC				X							
OHD050393149	PPC FLEXIBLE PACKAGING		X									
OHD052322989	CUSTOM PULTRUSIONS INC							X				
OHD153745138	MOLDED FIBERGLASS COMPOSITE SYSTEMS							X				
OHD986979326	TESTAMERICA LABORATORIES DBA EUROFINS							X				
OHD990694416	ROECHLING INDUSTRIAL CLEVELAND							X				
OHR000032334	COMPLETE LAUNDERING SERVICE INC		X									

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
OHR000137414	TENCOM LTD							X				
OHR000191387	INX INTERNATIONAL INK CO		X									
OK6213822798	MCALESTER ARMY AMMUNITION PLANT						X					
OKD000632737	TULSA DISPOSAL, LLC							X				
OKD007207129	GEMINI COATINGS, INC		X									
OKD007217748	FIBER GLASS SYSTEMS		X									
OKD007240088	CHARLES MACHINE WORKS, INC.		X					X				
OKD007336258	MIXON BROTHERS WOOD PRESERVING, INC			X								
OKD064551880	INTERPLASTIC CORPORATION			X				X				
OKD181233057	AMERICAN AIRLINES, INC.-WHEEL AND BRAKE CENTER							X				
OKD982555641	BAGS, INC.		X									
OKD987084183	BERRY GLOBAL		X									
OKD987086758	ISTI PLANT SERVICES		X									
OKD990696890	FLEX-N-GATE OKLAHOMA, L.L.C.		X									
OKR000013896	DIANON SYSTEMS, INC		X									
OKR000028126	ISTI PLANT SERVICES		X									
OKR000028134	ISTI PLANT SERVICES		X									
OKR000034660	HIS PAINTS		X									
ORD000773937	PCC STRUCTURALS INC SSBO							X				
ORD003992518	SUNSTONE CIRCUITS LLC	X						X				
ORD009020470	RODDA PAINT CORPORATION		X									
ORD009027970	PCC STRUCTURALS INC LPC							X				
ORD009049107	EAST SIDE PLATING, INC., PLANT 4							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
ORD010746402	CLARIOS							X				
ORD018216887	EAST SIDE PLATING INC PLANTS 1, 2 & 3							X				
ORD044106110	PACIFIC CAST TECHNOLOGIES INC., A CPP CO							X				
ORD050955848	ATI MILLERSBURG							X	X			
ORD050972322	MASTERBRAND CABINETS INC		X									
ORD065280190	ISOVOLTA, INC.		X									
ORD076414135	ERICKSON,INC.							X				
ORD980725592	TTM TECHNOLOGIES NORTH AMERICA LLC							X				
ORD980980353	WESTAK OF OREGON							X				
ORQ000018036	PENTAGON TECHNOLOGIES							X				
ORQ000023408	ORENCO SYSTEMS INC		X					X				
ORQ000026275	PIONEER METAL FINISHING CORP							X				
PA0000193334	REAXIS INC							X				
PA0000193409	PENN UNITED TECHNOLOGIES							X				
PA0890090004	BETTIS ATOMIC POWER LABORATORY							X				
PA6213820503	LETTERKENNY ARMY DEPOT						X					
PA8890031869	US DOE NATIONAL ENERGY TECHNOLOGY LAB							X				
PAD000429589	GROWS LANDFILL							X				
PAD001643691	HARLEY-DAVIDSON MOTOR CO OPERATIONS INC							X				
PAD002103265	MORGAN ADVANCED MATERIALS & TECHNOLOGY		X									
PAD002105179	UNITED REFINING CO - WARREN REFINERY							X				
PAD002312791	ADVANSIX RESINS & CHEMICALS LLC				X							
PAD002330165	EAST PENN MANUFACTURING CO INC	X							X			

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
PAD002344315	CARPENTER TECHNOLOGY CORP							X				
PAD002344463	VIANT COLLEGEVILLE, LLC		X									
PAD002976009	KAWNEER CO INC		X									
PAD003003407	PIXELLE SPECIALTY SOLUTIONS LLC							X				
PAD003004983	MGS INC		X									
PAD003018587	K & L PLATING CO INC							X				
PAD003023827	CNH INDUSTRIAL AMERICA LLC		X									
PAD003043353	CHEROKEE PHARMACEUTICLS LLC							X				
PAD004396610	KAWNEER COMMERCIAL WINDOWS LLC							X				
PAD044366003	SCHOTT NORTH AMERICA INC							X				
PAD045389988	GENTEX CORPORATION		X									
PAD049029697	ARCONIC LANCASTER CORP		X									
PAD055054316	ALLEGHENY SURFACE TECHNOLOGY							X				
PAD069895340	ABINGTON MEMORIAL HOSPITAL - JEFFERSON HEALTH		X									
PAD980714562	C-P CONVERTERS INC		X									
PAD980715510	THOMAS JEFFERSON UNIVERSITY HOSPITALS INC		X									
PAD980829287	JOHNSON MATTHEY INC	X										
PAD981739212	TYSON SUPERFUND SITE							X				
PAD981937121	PLAIN N FANCY CUSTOM CABINETRY INC		X									
PAD987284924	ALLEGHENY BRADFORD CORP							X				
PAD987370780	ACTON TECHNOLOGIES INC		X									
PAR000002105	DURA BOND PIPE LLC		X									
PAR000023622	REGAL INDUSTRIAL CORPORATION		X									

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
PAR000023853	GLOBAL PACKAGING INC		X									
PAR000030874	COPPERHEAD CHEMICAL CO INC						X					
PAR000033993	PENN COLOR INC		X									
PAR000034256	DUNMORE INTERNATIONAL CORPORATION - KEYSTONE		X									
PAR000509117	ASCENSUS SPECIALTIES CALLERY LLC						X	X				
PAR000522326	ZAMBELLI FIREWORKS MFG CO						X					
PAR000561423	NEMACOLIN SHOOTING ACADEMY								X			
PRD980594618	PENUELAS TECHNOLOGY PARK LLC							X				
RID075704999	ADMIRAL PACKAGING, INC.		X									
SC1750216169	MARINE CORPS AIR STATION BEAUFORT							X				
SC1890008989	SAVANNAH RIVER SITE							X				
SC3210020449	USATC & FORT JACKSON							X				
SC3570024460	JOINT BASE CHARLESTON AIR							X				
SC8170022620	JOINT BASE CHARLESTON WEAPONS							X		X		
SCD002038545	T&S BRASS & BRONZE WORKS INC							X				
SCD041387796	THE TIMKEN COMPANY- TYGER RIVER PLANT							X				
SCD043384072	SI GROUP INC ORANGEBURG				X							
SCD049126097	GE GREENVILLE GAS TURBINES LLC							X				
SCD069314045	MILLIKEN CHEMICAL DEWEY PLANT							X				
SCD069316271	MEDICAL UNIVERSITY OF SC							X				
SD2571924644	ELLSWORTH AIR FORCE BASE			X								
SDD981549983	TECH ORD, A DIVISION OF AMTEC CORPORATION						X	X				
SDR000209213	MARMEN ENERGY COMPANY		X									

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
TN0000266031	SERVITECH INDUSTRIES INC							X				
TN0890090004	U.S. DOE, EAST TENNESSEE TECHNOLOGY PARK							X				
TN1890090003	U.S. DEPARTMENT OF ENERGY, OAK RIDGE NATIONAL LABORATORY							X				
TN5210020421	HOLSTON ARMY AMMUNITION PLANT										X	
TN8570024044	ARNOLD ENGINEERING DEVELOPMENT COMPLEX/TSDCI	X				X	X	X				
TND000830778	PIONEER PLASTICS CORPORATION							X				
TND003095635	NUCLEAR FUEL SERVICES, INC. (NFS)							X				
TND003337292	OLIN CHLOR ALKALI PRODUCTS							X			X	
TND003338423	INDUSTRIAL PLATING COMPANY							X				
TND004036570	INNOPHOS, INC							X				
TND004045605	OLIVER FIBERGLASS PRODUCTS		X									
TND006387880	WAYMATIC INC		X									
TND007023658	BUCKMAN LABORATORIES							X				
TND007024672	COVORO MINING SOLUTIONS LLC							X				
TND047000898	BONNELL ALUMINUM, INC.							X				
TND053983862	ARTAZN, LLC							X				
TND054876834	TEKNOR APEX TENNESSEE COMPANY							X				
TND058660390	ROHM & HAAS CHEMICALS LLC					X	X	X			X	
TND063189898	JOHNSON CITY MEDICAL CENTER HOSPITAL		X			X		X				
TND071530125	SNAP-ON TOOLS ELIZABETHTON MANUFACTURING TNLP							X				
TND075382168	GIBSON USA ELECTRIC DIVISION	X	X									
TND077656197	COPPERWELD BIMETALLICS, LLC							X				
TND081464810	TECHNICAL PLATING							X				

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
TND083275198	SRG GLOBAL - RIPLEY							X				
TND980316269	UNIVERSITY OF TENNESSEE, AGRICULTURAL CAMPUS							X				
TND980729255	SMITH & NEPHEW							X				
TND980837892	EASTERN PLATING LLC	X										
TND980845838	VOLVO PENTA MARINE PRODUCTS, LLC		X					X				
TND981468333	CLARK CONTAINER INC		X									
TND982090151	KOMATSU AMERICA CORPORATION		X									
TND982090805	HUBBELL LENOIR CITY, INC.							X				
TND982125460	HAWKER POWERSOURCE INC.							X				
TND982148769	DENSO MANUFACTURING TENNESSEE INC.							X				
TND987770674	INDIAN PATH MEDICAL CENTER							X				
TND987776010	THE ROBINETTE COMPANY		X									
TND987776440	DEWAYNE'S QUALITY METAL COATINGS LLC							X				
TND987783073	SOUTHERN PLATING INC.							X				
TND991279233	MULTI-COLOR CORPORATION		X									
TND991279472	ADVANCED TECHNICAL CERAMICS COMPANY							X				
TNR000001842	DELTA FAUCET COMPANY OF TENNESSEE INC							X				
TNR000006189	MORGAN OLSON, LLC		X									
TNR000007153	YOUNG TOUCHSTONE							X				
TNR000008730	DENSO MANUFACTURING ATHENS TENNESSEE, INC.							X				
TNR000009241	UNIVERSITY HEALTH SYSTEM INC.							X				
TNR000012302	GLASTEEL - DIV OF STABILIT AMERICA INC							X				
TNR000017426	BERRY FILM PRODUCTS COMPANY, INC		X									

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
TNR000030635	DAN'S POLISHING SHOP							X				
TNR000030981	FRANKLIN WOODS COMMUNITY HOSPITAL							X				
TNR000037697	HUF NORTH AMERICA AUTOMOTIVE PARTS MANUFACTURING CORP.		X									
TNR000038794	NOVAMET SPECIALTY PRODUCTS					X						
TNR000043653	PLASKOLITE TENNESSEE, LLC							X				
TX4890110527	US DEPARTMENT OF ENERGY PANTEX PLANT						X					
TXD000461533	UNION CARBIDE TEXAS CITY				X							
TXD000751172	INEOS USA GREEN LAKE FACILITY											X
TXD000836445	EQUISTAR CHEMICALS											X
TXD000837427	KINDER MORGAN EXPORT TERMINAL							X				
TXD001700806	ASCEND PERFORMANCE MATERIALS CHOCOLATE BAYOU PLANT				X			X			X	X
TXD001806868	3M BROWNWOOD		X									
TXD007342942	PETRA CHEMICAL							X				
TXD007359284	TRANE US							X				
TXD007365984	L-3 COMMUNICATIONS INTEGRATED SYSTEMS MAJOR FIELD							X				
TXD008076846	INDORAMA VENTURES OXIDES PORT NECHES				X							
TXD008076853	HUNTSMAN PETROCHEMICAL CONROE PLANT						X					
TXD008080533	BLANCHARD REFINING GALVESTON BAY REFINERY											X
TXD008081101	CHEMOURS BEAUMONT WORKS INDUSTRIAL PARK							X				
TXD008081697	BASF FREEPORT SITE				X		X					X
TXD012660999	ICU MEDICAL							X				
TXD041515420	UNION CARBIDE SEADRIFT PLANT							X			X	
TXD058265067	LYONDELL CHEMICAL BAYPORT CHOATE PLANT							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
TXD059685339	VALERO MCKEE PLANT											X
TXD065096273	ROHM AND HAAS DEER PARK PLANT				X							
TXD066349770	TYLER PIPE								X			
TXD070137161	KM LIQUID PASADENA TERMINAL							X				
TXD078432457	CELANESE CLEAR LAKE PLANT						X					
TXD082688979	HOUSTON REFINING							X				
TXD086981172	TOTAL PETROCHEMICALS USA LA PORTE PLANT				X		X					
TXD087491973	ASARCO AMARILLO COPPER REFINERY											X
TXD980626774	BORGER REFINERY										X	
TXD981911209	OXY VINYLS DEER PARK VCM PLANT							X				
TXD981917024	EQUISTAR VICTORA PLANT				X							
TXD988059804	DPC INDUSTRIES CLEBURNE							X				
TXD988088761	MCA BEAUMONT SITE											X
TXD990796351	OPTIMUS STEEL	X										
TXR000000034	CONECSUS TEJAS FACILITY								X			
TXR000003780	KOPPERS INDUSTRIES							X				
TXR000004986	ALBEMARLE HOUSTON PLANT							X				
TXR000012898	FINISAR SHERMAN							X				
TXR000036764	VIKING POOLS TX								X			
TXR000057414	ARKEMA CLEAR LAKE						X					
TXR000057752	INV NYLON CHEMICALS AMERICAS ORANGE SITE				X							X
TXR000057968	INV NYLON CHEMICALS AMERICAS VICTORIA SITE				X							X
TXR000076828	EXXON MOBIL PASADENA INJECTION WELL											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
TXR000077644	OQ CHEMICALS BISHOP PLANT							X				
TXR000080174	DAY & ZIMMERMANN LONE STAR FACILITY						X					
TXR000083481	BLUE CUBE OPERATIONS			X	X							
UT0571724350	HILL AIR FORCE BASE							X				
UT3170027277	ATK LAUNCH SYSTEMS INC. - NIROP						X					
UT3213820894	TOOELE ARMY DEPOT						X					
UT3750211259	US ARMY DUGWAY PROVING GROUND						X					
UT5210090002	TOOELE ARMY DEPOT - SOUTH						X					
UTD981551294	ALS LIMITED							X				
UTR000014837	DUNCAN AVIATION, INC.		X									
VAD000020123	STIHL INCORPORATED	X										
VAD074747908	VIRGINIA TECH							X				
VAD082878786	ROSLYN CONVERTERS, INC.		X									
VAR000002352	RELINE AMERICA, LLC							X				
VAR000512350	TECTON PRODUCTS, LLC							X				
VAR000536458	FERRATEX SOLUTIONS, LLC							X				
VTD981203557	THE YANKEE CORPORATION							X				
VTR000524868	GLOBALFOUNDRIES US 2 LLC-VERMONT FACILITY							X				
WA0000072991	PACIFIC AEROSPACE & ELECTRONICS INC							X				
WA0000097675	METAL TECH		X					X				
WA1170023419	US NAVY KEYPORT OU1							X				
WA4170027268	US NAVY HOSPITAL BREMERTON 1 BOONE RD		X									
WA5170027291	NAVAL BASE KITSAP AT BANGOR							X				

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
WAD002838068	PUGET SOUND COATINGS LLC		X									
WAD009255647	SHIELDS BAG & PRINTING CO		X									
WAD009256819	BOEING PLANT 2							X				
WAD009262171	BOEING RENTON		X					X				
WAD041485301	WA WSU PULLMAN CAMP		X					X				
WAD041585464	BOEING EVERETT		X					X				
WAD041920554	ASKO PROCESSING INC							X				
WAD052593480	DELTA MARINE INDUSTRIES INC		X									
WAD057313033	MOHAWK NORTHERN PLASTICS LLC		X									
WAD059317404	NICHOLS BROS BOAT BUILDERS INC		X									
WAD076654185	VIRGINIA MASON MEDICAL CENTER		X									
WAD078216405	MULTICARE MEDICAL CENTER		X									
WAD092899574	EMERALD KALAMA CHEMICAL LLC				X							
WAD093687622	BATTELLE MARINE SCIENCES LAB							X				
WAD096767967	WA UW HARBORVIEW MEDICAL CENTER		X					X				
WAD098553381	MULTI MANUFACTURING INC								X			
WAD144414026	MOSES LAKE INDUSTRIES INC							X				
WAD980738652	WA UW SEATTLE CAMPUS							X				
WAD980835409	CH2O INC							X				
WAD980976450	FIBERGLASS TECHNOLOGY INDUSTRIES							X				
WAD980980577	EXOTIC METALS FORMING COMPANY							X				
WAD980980593	WA UW TACOMA BRANCH CAMPUS							X				
WAD980982037	BOEING NORTH BOEING FIELD		X					X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
WAD981763527	KING CNTY DEPT OF NAT RESOURCES ENV LAB							X				
WAD988472452	ALS GROUP USA CORP DBA ALS ENVIRONMENTAL							X				
WAD988482527	BOEING SPARES DISTRIBUTION CENTER							X				
WAD988493722	NOVATION INC							X				
WAD988505459	MERCURY PLASTICS INC		X									
WAH000004465	CANYON CREEK CABINET COMPANY		X									
WAH000009084	TEREX WASHINGTON INC MOSES LAKE		X									
WAH000010124	MICROCONNEX							X				
WAH000013235	SEATTLE CANCER CARE ALLIANCE		X									
WAH000015016	TEST AMERICA TACOMA							X				
WAH000016352	ACCRA FAB INC APPLEWAY DR							X				
WAH000022328	BATTELLE MEMORIAL INSTITUTE PAC NW DIV A							X				
WAH000024450	MILGARD MANUFACTURING INC PULTRUSION DIV		X					X				
WAH000025124	US DOE OFFICE OF SCIENCE PNNL SITE							X				
WAH000025959	DYNACARE NORTHWEST INC 17TH AVE							X				
WAH000027129	CEPHEID							X				
WAH000028018	HUNTWOOD INDUSTRIES LIBERTY LAKE							X				
WAH000028713	BELLMONT CABINET COMPANY		X									
WAH000031020	COLOR TECH MOUNTLAKE TERRACE		X									
WAH000031432	US WAX & POLYMER INC							X				
WAH000036260	NORTHWOOD CABINETS INC		X									
WAH000040664	HAAKON INDUSTRIES		X									
WAH000044128	APPLIED AERO SYSTEMS LLC							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
WAH000048753	VSPONE OPTICAL TECHNOLOGY CENTERS LACEY							X				
WAH000048846	COLLINS AEROSPACE		X									
WAH000054410	AERO FINISHING LLC		X									
WI0000352294	KRAEMER NORTH AMERICA LLC								X			
WID006125215	TYCO FIRE PRODUCTS LP					X	X	X	X			X
WID006183826	NORTHERN ENGRAVING CORP		X									
WID020488011	STRESAU LABORATORY INC						X					
WID048030951	SENECA FOODS CORP - VEGETABLE-DIV		X									
WID050549039	INX INTERNATIONAL INK CO				X							
WID053091005	PHILLIPS PLATING CORP							X				
WID059982066	SILGAN CONTAINERS MFG CORP		X									
WID063378871	GULFSTREAM AEROSPACE CORPORATION		X									
WID066888249	FIBERDOME PRODUCTS, LLC		X									
WID068157601	MAYO CLINIC HEALTH SYSTEM EAU CLAIRE HOSP		X									
WID074780982	MERRILL IRON & STEEL INC					X						
WID077482958	ASTRO INDUSTRIES INC								X			
WID091781625	AMCOR PACKAGING, INC. - OSHKOSH NORTH		X			X						
WID098546567	NORD GEAR CORP		X									
WID980904684	CARFAIR COMPOSITES USA INC		X									
WID980997167	AMCOR PACKAGING INC, - LANCASTER		X									
WID982061509	MIDWEST PREFINISHING INC		X									
WID982221350	COOPER POWER SYSTEMS LLC		X									
WID988588646	CL&D GRAPHICS				X							

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Onsite Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
WID988632105	LUBRIZOL LIFE SCIENCES INC					X						
WIR000104802	BELMARK INC PLT 3		X									
WIR000107078	PROAMPAC		X		X							
WIR000122119	SENECA FOODS CORP		X									
WIR000123398	FIBERPRO INC DBA ADVANCED FIBER PRODUCTS		X									
WIR000135327	MARSHFIELD CLINIC - MARSHFIELD LABORATORIES		X									
WIR000140541	FOREFRONT MANAGEMENT LLC							X				
WIR000149922	CUSTOM PULTRUSIONS INC							X				
WIR000166850	BELMARK PLANT 6		X									
WIR000168773	SAFRAN LANDING SYSTEMS WHEEL&BRAKE SVCS LLC						X					
WIR000177303	ELKHORN ELECTROPOLISHING LLC							X				
WIT560011330	NORTHERN ENGRAVING CORP - WEST SALEM DIV					X						
WIT560011595	AMCOR FILMS		X									
WIT560011850	JCI/TYCO					X	X					
WV0170023691	ALLIANT TECHSYSTEMS OPERATIONS LLC, ABL OPERATIONS						X					
WVD004325353	MPM SILICONES, LLC						X	X			X	
WVD004336343	EAGLE NATRIUM LLC							X				
WVD980552384	SI GROUP, INC - NORTH PLANT							X				
WVD981945215	NEWCHEM, INCORPORATED		X			X						
WVR000014019	CLEARON TABLETING & PACKAGING							X				
WVR000502815	WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION							X				
WVR000532440	DUPONT SPECIALTY PRODUCTS USA LLC				X							
WYD048743009	SINCLAIR CASPER REFINING COMPANY							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection
WYD079959185	SINCLAIR WYOMING REFINING COMPANY							X			X	
WYR000202507	FORMER CONOCO GLENROCK REFINFERY								X			
XJW000012427	MCCLARIN PLASTICS, LLC		X					X				
XJW988488052	PACE INTERNATIONAL LLC WAPATO PLANT							X				

Exhibit B-2
Captive Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL			TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection	
AK6210022426	US ARMY GARRISON FORT WAINWRIGHT												X
AL3210020027	ANNISTON ARMY DEPOT						X						
ALD079474037	UNIVERSITY OF SOUTH ALABAMA	X		X		X		X					X
ALD983171554	EXPRESS CONTAINER SERVICES OF CREOLA LLC												X
ARD980867873	ARMTEC COUNTERMEASURES CO.						X						
CA2890090002	LAWRENCE LIVERMORE NATIONAL LABORATORY - SITE 300						X						X
CA6170024289	NAVAL BASE SAN DIEGO (AKA NAVAL STATION SAN DIEGO)			X				X					X
CA7170090016	NAVAL AIR STATION NORTH ISLAND (NASNI) HAZARDOUS WASTE FACILITY COMPLEX			X			X	X			X		
CAC003102772	PRIMM POOL							X					
CAD981168107	SAN DIEGO GAS & ELECTRIC MIRAMAR												X
CAD981422017	SOUTHERN CALIFORNIA GAS CO												X
CAD981695398	UNITED PARCEL SERVICE - SAN FERNANDO HUB												X
CAL000009814	LACDPW MD 4 HOLLYDALE												X
CAL000039944	TORO PETROLEUM CORPORATION												X
CAL000058647	CRYOQUIP LLC		X										
CAL000094522	EUROCRAFT ARCHITECTURAL METAL						X	X					
CAL000122856	CALIFORNIA MARINE DIESEL			X		X							X
CAL000244793	HOLY CROSS CEMETERY			X									
CAL000284306	ORCHARD MACHINERY CORP					X							X
CAL000310325	MCCAMPBELL ANALYTICAL INC		X										

Exhibit B-2
Captive Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL			TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection	
CAL000313487	MY CHEVROLET INC DBA MY CHEVROLET					X							
CAL000382386	WAREHOUSE PAINT					X							
CAL000382387	WAREHOUSE PAINT					X							
CAL000384078	EUROFINS AGROSCIENCE SERVICES LLC							X					
CAL000386066	WAREHOUSE PAINT					X							
CAL000390456	J&P TRUCK BODY SHOP INC					X							
CAL000393949	JEFFS TWIN OAKS GARAGE												X
CAL000427361	ALLIED CLEAN FUELS PLAZA			X									
CAL000435290	CUSTOM FLAVORS												X
CAL000452546	WAREHOUSE PAINTS					X							
CAL000454234	THE YEBO GROUP							X					
CAL000456156	LAGUNA SECA RECREATION AREA												X
CAL912061911	BAY MARINE BOATWORKS							X					
CAR000007658	CHEMICAL TRANSFER CO., INC.			X				X					
CAR000019430	NAVAL BASE CORONADO MIXED WASTE STORAGE FACILITY												X
CAR000255869	UPS WESTERN REGIONAL INTERNATIONAL AIR HUB												X
CAR000274662	UNITED PARCEL SERVICE INC												X
CAR000282996	APPLIED THIN-FILMS PRODUCTS												X
CAT000625137	SOUTHERN CALIFORNIA GAS CO												X
COD007431505	UNIVERSITY OF COLORADO - BOULDER		X					X					X
CTD058509712	DYNO NOBEL INC						X						
CTD990672081	RTX CORPORATION							X					

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Captive Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL			TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection	
FL2800016121	CAPE CANAVERAL SPACE FORCE STATION						X						
FL6170022952	NAS KEY WEST												X
FLD000823393	UNIVERSITY OF FLORIDA												X
FLD004092839	ENVIROFOCUS TECHNOLOGIES LLC	X											
FLD061993606	LOCKHEED MARTIN - MISSILES & FIRE CONTROL												X
FLD080182744	AEROTHRUST HOLDINGS LLC								X				
FLD984229609	PHOTOGRAPHIC WASTE CONTROL INC					X							
FLR000059568	THE BOEING COMPANY - CECIL FIELD												X
GU5170022680	NAVAL FACILITIES ENGINEERING COMMAND MARIANAS							X					X
HI1170024334	NAVY REGION HAWAII - PEARL HARBOR-HICKAM							X					X
IAT200010924	UNIVERSITY OF IOWA - TSDF ENVIRONMENTAL HEALTH & SAFETY							X					X
ID4890008952	US DOE INL LAB							X	X				
ILD000802801	GENERAL DYNAMICS- OTS TR						X						
ILD984828558	WOOD RIVER WWTP							X					
IND006050967	EVONIK CORPORATION TIPPECANOE LABS		X				X	X					
INR000000463	MICRONUTRIENTS USA LLC	X		X									
INR000149351	NIPPON EXPRESS USA INC												X
KY0001012012	UNIVERSITY OF LOUISVILLE - EPSC												X
KYD000830851	UNIVERSITY OF KENTUCKY-ENVIRONMENTAL MGMT.							X					X
KYD980840300	TRIMAC TRANSPORTATION EAST, INC.												X

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Captive Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL			TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection	
KYD985072008	WESTLAKE VINYLS, INC.			X									
LAD000618256	CECOS INTERNATIONAL, INC.											X	
LAD008175390	CORNERSTONE CHEMICAL COMPANY											X	
MAD981063209	HARBOR FUELS												X
MAR000530584	PARTNERS OF MASSACHUSETTS LLC							X					
MAR000571505	CITY OF NEWTON ELEVATED STORAGE TANK							X					
MD4170024109	NAVAL SUPPORT FACILITY INDIAN HEAD						X						
MDD980829873	UNIVERSITY OF MARYLAND, COLLEGE PARK							X					X
ME7170022019	PORTSMOUTH NAVAL SHIPYARD												X
MID000718841	DTE ELECTRIC COMPANY							X	X				X
MID000724724	THE DOW CHEMICAL COMPANY						X						X
MID053343976	MICHIGAN STATE UNIVERSITY												X
MID980617435	THE DOW CHEMICAL COMPANY		X								X		
MID985567718	DEPOR INDUSTRIES INC								X				
MIR000001834	UNIVERSITY OF MICHIGAN												X
MIR000032417	FLEX-N-GATE AUTOMOTIVE												X
MN0000981415	U OF M - FAY THOMPSON CENTER FOR ENVIRONMENTAL MANAGEMENT												X
MND000826206	CHESTNUT HAZARDOUS WASTE STORAGE FACILITY, NSP CO. (DBA XCEL ENERGY)												X
MND006172969	3M CHEMICAL OPERATIONS' COTTAGE GROVE FACILITY	X			X		X						X
MND071363246	MAYO CLINIC HOSPITAL - ROCHESTER ST MARY'S CAMPUS							X					X

Exhibit B-2
Captive Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL			TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection	
MND081138604	ALLIANT TECHSYSTEMS OPERATIONS LLC/PROVING GROUND						X						
MND083467688	MAYO CLINIC - ROCHESTER							X					X
MOD050226075	BASF CORP HANNIBAL SITE						X						
MS0000331579	KING'S DAUGHTERS MEDICAL CENTER												X
MSR000000083	JACKSON STATE UNIVERSITY					X							X
MSR000002576	INDUSTRIAL CORROSION CONTROL, INC					X							
MSR000003962	UNITED STATES MARINE INC		X										
NCD000830737	NCSU MAIN CAMPUS												X
NCD093137636	CAROLINA POLE LELAND, INC.							X					X
NCD982093783	THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL												X
NED000766816	UNIVERSITY OF NEBRASKA					X		X					
NER021120901	NPPD BEATRICE GAS PLANT								X				
NJD000582387	RUTGERS UNIVERSITY-BUSCH/LIV/ESB												X
NJD000768028	PSE&G-HARRISON FACILITY												X
NJD002385730	CHEMOURS COMPANY FC, LLC (THE)										X		
NJD118880145	LAKEVIEW CENTER												X
NJD980534408	BIOREFERENCE LABORATORIES												X
NJR000083568	SITE 196 - POTW OUTFALL LINE								X				
NJR986638419	MORRIS CTY PUBLIC SAFETY TRAINING ACADEMY												X
NJR986647576	HONEYWELL SITE 172								X				
NJR986651164	HUDSON COUNTY CHROMATE SITE 188								X				

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Captive Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL			TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection	
NM4890139088	U.S. DOE WASTE ISOLATION PILOT PLANT							X			X		X
NM5890110518	SANDIA NATIONAL LABORATORIES						X	X					X
NV3890090001	U. S. DOE, NNSA/NFO						X				X		
NV5210090010	NEW BOMB FACILITY (HAWTHORNE ARMY DEPOT)						X						
NY0000367367	CLINTON COUNTY SOLID WASTE DEPT										X		
NYD000631994	UNIVERSITY OF ROCHESTER							X					X
NYD000705939	CON EDISON - EASTVIEW SERVICE CENTER							X					
NYD000767657	OCCIDENTAL CHEMICAL - LOVE CANAL							X					
NYD002113736	TULIP MOLDED PLASTICS LLC			X									
NYD006866008	HICKSVILLE OPERATIONS CENTER-PSEG												X
NYD074024456	TULIP RICHARDSON MFG			X									
NYD980592497	EASTMAN KODAK CO-BUSINESS PARK		X					X					X
NYD980593636	CON EDISON - ASTORIA							X					X
NYD986870582	NYCDEP HILLVIEW RESERVOIR							X					
NYD986898526	NYCDEP-DELAWARE AQUEDUCT SHAFT18 COMPLEX								X				X
NYR000056366	NYC POLICE DEPARTMENT FIRING RANGE												X
NYR000086900	NYCDEP DOWNSVILLE SHOP COMPLEX												X
NYR000122879	GUARANTEED RETURNS						X						X
NYR000129452	NYCDEP CROTON FILTRATION PLANT					X		X	X				X
NYR000182584	NYS CANAL CORPORATION												X
NYR000250894	Z FARMS ORGANIC								X				

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Captive Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL			TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection	
NYR000251264	ZL 2720 LLC								X				
NYR000252809	TAC NEW ROCHELLE LLC								X				
NYR000253443	SURF AVENUE RAILROAD CLEANERS SITE												X
OH7571724312	DEPARTMENT OF THE AIR FORCE BASE AREA B												X
OHD004304689	PPG INDUSTRIES OHIO INC					X	X						
OHD005057542	BP HUSKY REFINING LLC - TOLEDO REFINERY							X					
OHD157370594	SHERWIN-WILLIAMS CO												X
OKD000803601	PHILLIPS 66 RESEARCH CENTER												X
OKP000037309	I-35 OVER SALT FORK CREEK BRIDGE NBI#S 14512 & 14511								X				X
PAD089352983	ALPHA ASSEMBLY SOLUTIONS	X											
PAD096844311	ACTION MANUFACTURING CO						X						
RID001200252	TECHNIC INC	X						X					
RIP000038477	VERIZON - MH #N48-1												X
RIP000038514	VERIZON												X
RIP000038692	VERIZON - MH#52/52-1												X
SCD981866007	BASF CORP	X											
TN3890090001	U.S. DOE, Y-12 NATIONAL SECURITY COMPLEX	X				X	X	X			X		X
TND003376928	EASTMAN CHEMICAL COMPANY, TENNESSEE OPERATIONS				X	X	X				X		
TND981026594	KILGORE FLARES COMPANY LLC						X						
TXD007330202	EASTMAN CHEMICAL			X			X	X			X		
TXD008079642	SABINE RIVER OPERATIONS						X	X					

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Captive Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL			TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection	
TXD008092793	DOW TEXAS OPERATIONS FREEPORT			X			X	X			X		
TXD008106999	SASOL CHEMICALS USA GREENS BAYOU PLANT											X	
TXD056542749	RANGER AVIATION MATHIS FIELD MUNICIPAL AIRPORT												X
TXD083472266	LYONDELL CHEMICAL CHANNELVIEW				X							X	
TXD981911209	OXY VINYLS DEER PARK VCM PLANT						X						
TXD982286932	OCCIDENTAL CHEMICAL OXYCHEM INGLESIDE PLANT						X	X					
TXD987988318	SCHLUMBERGER WELL SERVICES PERFORATING AND TESTING						X						
TXR000075788	WASTE CONTROL SPECIALISTS ANDREWS FACILITY								X		X		
TXR000077784	OXEA BAY CITY PLANT				X								
TXR000083437	EXPAL TEXARKANA						X						
TXR000085064	MHBA CHOCOLATE BAYOU PLANT											X	
TXR000085254	HERITAGE THERMAL OF TEXAS						X						
UT0570090001	UTAH TEST AND TRAINING RANGE						X						
UTD009081357	ATK LAUNCH SYSTEMS LLC - PROMONTORY						X						X
UTR000008318	JORDAN RIVER GALVANIZING, INC.							X					
VA1170024813	NORFOLK NAVAL SHIPYARD							X					X
VA1210020730	RADFORD ARMY AMMUNITION PLANT						X						
VA6170061463	NAVAL STATION NORFOLK												X
VA7170024684	US NAVY DAHLGREN						X						
VTD000636563	UVM - ENVIRONMENTAL SAFETY FACILITY												X

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Captive Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL			TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Land Treatment/ Application	Landfill	Deepwell Injection	
VTR000502252	CHITTENDEN SOLID WASTE DISTRICT ENVIRONMENTAL DEPOT												X
WA1891406349	US DOE BPA ROSS COMPLEX												X
WA2170023418	US NAVY PSNS & IMF							X					X
WA7890008967	US DEPT OF ENERGY HANFORD FACILITY							X			X		X
WAD007943764	AVISTA CORP SPOKANE SERVICE CENTER												X
WAD041337130	BOEING COMPANY AUBURN							X					
WAD041485301	WA WSU PULLMAN CAMP						X						
WAD041585464	BOEING EVERETT												X
WAD092899574	EMERALD KALAMA CHEMICAL LLC							X					
WAD980738652	WA UW SEATTLE CAMPUS						X						
WAH000038112	AVIATION TECHNICAL SVCS HANGAR 1							X					
WAR000004879	TRIDENT SEAFOODS CORP TACOMA												X
WID000874503	RACINE WASTEWATER TRMT PLT CITY OF							X					
WID006091425	S C JOHNSON & SON INC	X											
WID044393114	SIEMENS ENERGY INC							X					
WIR000001552	AMCOR WISCONSIN, LLC - BOSCOBEL		X		X	X							
WIR000177303	ELKHORN ELECTROPOLISHING LLC												X
WVD056866312	COVESTRO LLC				X								

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Commercial Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
AKR000004184	US ECOLOGY ALASKA, LLC.							X				X
ALD000622464	CHEMICAL WASTE MANAGEMENT, INC.	X				X		X	X	X		X
ALD046481032	SANDERS LEAD COMPANY, INC.	X		X				X				
ALD067138891	ROBBIE D WOOD, INC.					X						X
ALD070513767	GIANT RESOURCE RECOVERY - ATTALLA, INC.	X	X	X		X		X	X			X
ALD072095169	RESEARCH SOLUTIONS GROUP INC PELHAM FACILITY					X						X
ALD094476793	ALLWORTH, LLC	X	X	X		X		X	X			X
ALD981020894	CLEAN EARTH OF ALABAMA, INC.	X	X	X		X		X	X			X
ALD983167891	TCI OF ALABAMA, LLC	X										X
ALD983177015	US ECOLOGY SULLIGENT, INC.	X	X	X		X		X	X			X
ALR000007237	ACTION RESOURCES, LLC					X						X
ALR000042754	STEEL DUST RECYCLING, LLC	X										X
ALR000044990	ENVIRONMENTAL & RECYCLING SOLUTIONS INC			X		X						
ALR000046904	SPECTRUM SUSTAINABLE SOLUTIONS, INC.											X
ALR000051458	COLORMASTERS, INC.		X									
ALR000053272	SAFEWAY INDUSTRIAL SERVICES, LLC											X
ALR000065748	BIRMINGHAM TERMINAL RAILWAY	X										
ARD006354161	ELEMENTAL ENVIRONMENTAL SOLUTIONS LLC						X	X	X	X		X
ARD069748192	CLEAN HARBORS EL DORADO, LLC	X	X	X		X	X	X	X			X
ARD981057870	RINECO CHEMICAL INDUSTRIES, LLC	X	X	X		X		X	X			X

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Commercial Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
ARD981512270	ASH GROVE CEMENT COMPANY			X	X	X		X			X	X
ARD983267279	UNIVERSAL TRANSPORT INC					X						
ARR000024679	RINECO ENVIRONMENTAL SERVICES, LLC					X						X
AZ0000337360	VEOLIA ES TECHNICAL SOLUTIONS	X		X		X		X				X
AZC950823111	LA PAZ COUNTY-COMMUNITY DEVELOPMENT AGENCY								X			
AZD049318009	CLEAN HARBORS ARIZONA LLC	X		X		X		X				X
AZD081705402	HERITAGE ENVIRONMENTAL SERVICES LLC	X	X	X		X		X				X
AZD980695332	GANNON & SCOTT PHOENIX INC	X										X
AZD980735500	WORLD RESOURCES COMPANY	X		X								X
AZD981969504	SAFETY-KLEEN											X
AZD982434185	WM LAMPTRACKER INC	X						X				
CAD066233966	DESOTEC			X				X				X
AZD982484578	TRANSCHEM ENVIRONMENTAL			X		X						X
AZD983469594	1545 LIGHTING RESOURCES LLC	X										X
AZD983476680	1522 LIGHTING RESOURCES	X										X
AZD983481813	BUTTERFIELD STATION LANDFILL								X			
AZR000002428	COPPER MOUNTAIN LANDFILL								X			X
AZR000003681	THERMO FLUIDS INC - PHOENIX			X		X						X
AZR000030452	LES - PHOENIX			X				X				X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
AZR000031559	NORTHWEST REGIONAL LANDFILL								X			
AZR000501510	AA SYDCOL LLC			X		X		X				X
AZR000504902	BATTERY SOLUTIONS INC											X
AZR000506980	SOUTH YUMA COUNTY LANDFILL COMPOST FACILITY								X			X
AZR000509950	BOTAVIA ENERGY LLC					X						X
AZR000510065	US FUEL OIL, LLC											X
AZR000515924	YUMA YES WASTE TRANSFER FACILITY			X								X
AZR000519256	CIRBA SOLUTIONS SERVICES US, LLC	X										
AZR000519264	THE OIL GUYS											X
AZR000520304	AA SYDCOL LLC	X	X	X				X				X
AZR000520478	ENVIRONMENTAL WASTE SOLUTIONS, INC.					X						X
AZR000520882	LA PAZ COUNTY LANDFILL								X			X
AZR000521146	YUMA YES 2 WASTE TRANSFER STATION			X				X				X
AZT000614602	SRC ARIZONA, LLC											X
AZT050010685	HVF PRECIOUS METALS LLC	X										
CA0000084517	SAFETY-KLEEN SYSTEMS,INC.											X
CAC003097298	EVMWD			X								
CAC003139759	EVMWD			X								
CAC003139761	EVMWD			X								
CAC003139763	EVMWD			X								
CAC003139765	EVMWD			X								

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
CAC003139769	EVMWD			X								
CAC003139772	EVMWD											X
CAC003141647	PHOTO WASTE RECYCLING CO., INC;	X										
CAD008252405	PACIFIC RESOURCE RECOVERY SERVICES INC	X	X	X		X		X				X
CAD008302903	VEOLIA ES TECHNICAL SOLUTIONS LLC	X	X	X		X		X	X			X
CAD008364432	RHO-CHEM LLC	X		X		X		X				X
CAD008488025	PHIBRO-TECH INC	X		X		X		X	X			X
CAD009007626	AZUSA LAND RECLAMATION CO INC							X				X
CAD028277036	WORLD OIL ENVIRONMENTAL SERVICES	X		X		X		X				X
CAD028409019	CROSBY & OVERTON		X	X		X		X			X	X
CAD029282308	COAST COUNTIES TRUCK & EQUIP CO							X				
CAD042242081	INDUSTRIAL CONTAINER SERVICES			X								X
CAD044003556	RAMOS ENVIRONMENTAL SERVICES			X				X				X
CAD044429835	CLEAN HARBORS OF WILMINGTON	X	X	X		X		X	X			X
CAD050806850	EMERALD TRANSFORMER LOS ANGELES, LLC			X								X
CAD053866794	PATRIOT ENVIRONMENTAL SERVICES			X								
CAD055766422	ENERGY SOLUTIONS (US) LLC											X
CAD059494310	CLEAN HARBORS SAN JOSE	X		X		X		X	X			X
CAD060398229	HERAEUS PRECIOUS METALS NORTH AMERICA LLC	X										
CAD066233966	ECOBAT RESOURCES CALIFORNIA INC	X							X			X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
CAD069124717	GLENCORE RECYCLING LLC	X										X
CAD069135846	TTM TECHNOLOGIES, INC.											X
CAD072953771	UNITED PUMPING SERVICE INC	X						X				
CAD088504881	KINSBURSKY BROTHERS SUPPLY INC	X		X								X
CAD097030993	US ECOLOGY VERNON INC	X	X	X		X		X	X			X
CAD099452708	INDUSTRIAL SERVICE OIL CO INC			X		X						X
CAD980585293	INDUSTRIAL WASTE UTILIZATION INC	X	X					X				X
CAD980636831	LIQUID WASTE MANAGEMENT, INC.											X
CAD980675276	CLEAN HARBORS BUTTONWILLOW LLC			X				X	X	X		X
CAD980694103	WORLD OIL ENVIRONMENTAL SERVICES - CHICO II											X
CAD980817159	SAFETY-KLEEN SYSTEMS, INC					X						X
CAD980884183	GEM OF RANCHO CORDOVA LLC	X	X	X		X		X				X
CAD980887418	SAFETY-KLEEN OF CALIFORNIA INC			X				X				X
CAD980888598	WIT SALES AND REFINING	X										
CAD980891352	STERICYCLE INC											X
CAD981377864	IDR ENVIRONMENTAL SERVICES											X
CAD981382732	ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY								X			
CAD981402522	COMMODITY RESOURCE AND ENVIRONMENT	X										X
CAD981412356	PACIFIC TRANS ENVIRONMENTAL SERVICES INC											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
CAD981429673	PHOTO WASTE RECYCLING CO INC	X		X		X						
CAD981966286	ARROWHEAD DRINKING WATER CO			X								X
CAD982042475	RECOLOGY HAY ROAD											X
CAD982052797	J&B REFINING INC. DBA J&B ENTERPRISES	X						X				X
CAD982411993	AERC ACQUISITION CORP DBA AERC RECYCLING SOLUTIONS, A CLEAN EARTH COMPANY	X										
CAD982431785	EFFICIENT X RAY INC											X
CAD982433575	COMMODITY RESOUREC & ENVIRONMENTAL INC.	X										
CAD982439895	CLEAN HARBORS ENVIRONMENTAL SERVICES INC PORT OF REDWOOD CITY											X
CAD982444481	HAZMAT TSDF INC, FORMER FILTER RECYCLING SERVICES INC	X	X	X		X		X				X
CAD982446858	SAFETY KLEEN OF CALIFORNIA SANTA MARIA											X
CAD982446874	SAFETY-KLEEN OF CALIFORNIA INC - DAVIS							X				X
CAD982446882	SAFETY-KLEEN OF CALIFORNIA INC - FRESNO											X
CAD982515991	MGM TRANSFORMER COMPANY											X
CAD982523433	DILLARD ENVIRONMENTAL SERVICES											X
CAD983609678	BLACK GOLD INDUSTRIES			X				X				X
CAD983613688	MILES CHEMICAL COMPANY INC		X					X	X			X
CAL000024110	P KAY METAL INC			X								
CAL000027822	COAST COUNTIES TRUCK & EQUIP											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
CAL000098454	A & A FEROS NON FEROS METAL LLC							X				
CAL000102751	WORLD OIL - SAN JOAQUIN LLC											X
CAL000130029	E-RECYCLING OF CALIFORNIA											X
CAL000190080	FORWARD LANDFILL INC DISPOSAL							X	X			
CAL000190816	CALIFORNIA OIL TRANSFER LLC											X
CAL000224539	FRS ENVIRONMENTAL, INC.		X									X
CAL000282598	HERITAGE-CRYSTAL CLEAN LLC			X								X
CAL000298854	BAYVIEW ENVIRONMENTAL SERVICES INC											X
CAL000330453	AGRITEC INT DBA CLEANTECH ENVIRONMENTAL			X								X
CAL000335063	CRIMSON PIPELINE LP-SANTA PAULA PUMP STATION											X
CAL000346650	E-RECYCLING OF CALIFORNIA	X										
CAL000355412	SR BRAY LLC DBA POWER PLUS											X
CAL000355416	SR BRAY LLC DBA POWER PLUS											X
CAL000355418	SR BRAY LLC DBA POWER PLUS											X
CAL000359114	THERM-X OF CALIFORNIA INC.							X				
CAL000387057	SR BRAY LLC DBA POWER PLUS											X
CAL000393680	WORLD OIL ENVIRONMENTAL SERVICES			X								X
CAL000402921	SR BRAY LLC DBA POWER PLUS											X
CAL000407695	GOLDEN STATE ENVIRONMENTAL			X								

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
CAL000417766	CRIMSON CALIFORNIA PIPELINE LP KETTLEMAN											X
CAL000432243	CALICO LIFE SCIENCES											X
CAL000436661	SR BRAY LLC DBA POWER PLUS											X
CAL000446852	STRESS LESS EXPRESS			X								
CAL000455031	TEMARRY RECYCLING INC											X
CAL000827844	WORLD OIL ENVIRONMENTAL SERVICES											X
CAL912623968	CLAIRE LILENTHAL											X
CAL930256136	WORLD OIL ENVIRONMENTAL SERVICES - FORTUNA											X
CAR000058784	DESOTEC US LLC			X								
CAR000070540	ADVANCED CHEMICAL TRANSPORT LLC		X	X		X		X				X
CAR000094516	ARNULFO SIERRA DBA A SIERRA TRUCKING											X
CAR000129759	HTS ENVIRONMENTAL SERVICES			X								X
CAR000148809	INC TRUCKING INC			X								X
CAR000152058	EARTHWISE SERVICES LLC											X
CAR000156125	LIGHTING RESOURCES LLC	X										X
CAR000159681	WESTERN ENVIRONMENTAL SERVICES INC											X
CAR000161281	TORRES CARDASO TRUCKING											
CAR000164327	T AND R ENVIRONMENTAL SERVICES			X								
CAR000170092	AERC AQUISITION CORPORATION DBA AERC RECYCLING SOLUTIONS, A CLEAN EARTH COMPANY											

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
CAR000171017	FREMOUW ENVIRONMENTAL SERVICES INC							X				
CAR000172189	AMBERWICK CORPORATION											
CAR000173096	GLOBAL COMMUNICATION SEMICONDUCTORS LLC			X								
CAR000175422	WORLDWIDE RECOVERY SYSTEM INC	X						X				
CAR000175828	GONZALO SANCHEZ DBA SANCHEZ TRANSPORT			X								
CAR000176826	HUNTER CONSULTING INC DBA HCI ENV	X										
CAR000177949	CORTEZ TRUCKING											
CAR000178442	MANUEL E MANZANO DBA ME MANZANO TRANSPOR											
CAR000179747	INGENIUM GROUP LLC			X								
CAR000180737	PONDER ENVIRONMENTAL SERVICES INC											
CAR000183574	ENVIRONMENTAL MNGMT TECHNOLOGIES INC											
CAR000184788	EIGHTEEN TRUCKING INC											
CAR000186569	VILLANUEVA TRUCKING											
CAR000187922	RUST AND SONS TRUCKING INC											X
CAR000194217	TEMARRY RECYCLING INC	X	X	X		X		X				X
CAR000206086	NORTH STATE ENVIRONMENTAL					X						X
CAR000216770	CATRANS											X
CAR000217513	ENVIRONMENTAL LOGISTICS INC											X
CAR000224428	ADVANCED CHEMICAL TRANSPORT INC			X		X		X				
CAR000224568	BRADLEY TANKS INC			X								X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
CAR000225052	CAL MICRO PROCESSING, LLC	X										
CAR000226506	CROSBY AND OVERTON											X
CAR000226894	BIOLOGIC ENVIRONMENTAL SERVICES & WASTE SOLUTIONS							X				
CAR000242487	SUMMIT ENVIRONMENTAL SERVICES INC											X
CAR000245050	ECOTRANS LLC					X						X
CAR000250456	WESTCOR ENV INC											X
CAR000252015	REYES TRUCKING											X
CAR000257154	CHAYOLI TRUCKING											X
CAR000259382	D&H TRANSPORT LLC											X
CAR000262709	ENVIRO-GUIDE, INC.		X									
CAR000265140	MEDIWASTE DISPOSAL, LLC			X								X
CAR000268482	CARBON, INC											X
CAR000276295	WM ENVIROSERV			X					X			
CAR000277566	ENVIRONMENTAL REGULATORY COMPLIANCE LLC DBA ERC-LLC											X
CAR000278564	GENERAL TRUCKING SERVICES INC			X								
CAR000281949	NAVARROS BROS INC			X								X
CAR000289033	HERNANDEZ & SONS											X
CAR000289066	ALEJANDRO TAFOLLA GUTIERREZ DBA TAFOLLA TRUCKING INC											X
CAR000289413	EFREN DE LA MORA DBA DE LA MORA TRUCKING											X
CAR000289595	JORGE E LOMELI DBA JL FAMILY TRUCKING											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
CAR000290130	RENE GOMEZ JR DBA RENE GOMEZ JR TRUCKING											X
CAR000294025	IBARRA EXPRESS INC											X
CAR000294306	JOSE MARIA GARCIA LEON											X
CAR000295337	GAIACA LLC		X									
CAR000296038	FUELTEC INC			X								
CAR000301929	HM BIO-SERV, INC					X						
CAR000304832	JAVIER PONCE DBA PONCE TRANSPORT			X								X
CAR000306787	SGK TRUCKING LLC			X								
CAR000307181	DELTA EXPRESS INC											X
CAR000307488	ROBLES TRANSPORT LLC			X								X
CAR000327064	ERNESTO SOLORIO PULIDO DBA SOLORIO TRANSPORT											X
CAR000327932	CENTRAL CAL LOGISTICS LLC			X								
CAR000328088	LUIS A HERNANDEZ DBA HL TRANSPORTATION											X
CAR000329763	AUTO DREAM TRANSPORT INC			X								
CAT000613935	SAFETY-KLEEN SYSTEMS INC											X
CAT000613976	SAFETY-KLEEN SYSTEMS INC		X					X				X
CAT000624247	M P ENVIRONMENTAL SVCS INC											X
CAT000646117	CHEMICAL WASTE MANAGEMENT, INC.	X	X					X	X	X		X
CAT080012602	WORLD OIL ENVIRONMENTAL SERVICES - DIXON											X
CAT080013352	WORLD OIL RECYCLING	X	X	X		X		X	X			X
CAT080014079	VEOLIA ES TECHNICAL SOLUTIONS LLC RICHMOND		X	X		X		X	X			X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
CAT080025711	WORLD OIL ENVIRONMENTAL SERVICES - FONTANA	X		X				X				X
CAT080033681	WORLD OIL TERMINALS - VERNON			X				X				X
COD000716621	SAFETY-KLEEN SYSTEMS INC - ENGLEWOOD											X
COD000716639	SAFETY-KLEEN SYSTEMS INC - PUEBLO											X
COD980591184	VEOLIA ES TECHNICAL SOLUTIONS LLC	X	X	X		X		X	X			X
COD991300484	CLEAN HARBORS DEER TRAIL LLC			X		X		X	X	X		X
CT5000001495	NORTHEAST LAMP RECYCLING INC	X										X
CTD000604488	CLEAN HARBORS OF CONNECTICUT INC							X	X			X
CTD002593887	TRADEBE TREATMENT AND RECYCLING OF BRIDGEPORT LLC					X		X	X			X
CTD021816889	TRADEBE TREATMENT AND RECYCLING OF NORTHEAST LLC	X	X			X		X	X			X
FL0000207449	VEOLIA ES TECHNICAL SOLUTIONS LLC	X										X
FLD152764767	HAGAN HOLDING COMPANY DBA HOWCO ENVIRONMENTAL SERVICES											X
FLD980559728	TRIUMVIRATE ENVIRONMENTAL SERVICES INC					X						X
FLD980711071	PERMA-FIX OF FLORIDA INC		X			X		X	X			X
FLD980729610	CLEAN HARBORS FLORIDA LLC					X		X				X
FLD980847214	SAFETY-KLEEN SYSTEMS INC		X									X
FLD980847271	SAFETY-KLEEN SYSTEMS INC											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
FLD981018773	TRIUMVIRATE ENVIRONMENTAL SERVICES INC					X		X				X
FLD981932494	US ECOLOGY TAMPA INC	X		X		X		X	X			X
FLD982133159	SAFETY-KLEEN SYSTEMS INC		X									X
FLD984167791	SAFETY-KLEEN SYSTEMS INC											X
FLD984171165	SAFETY-KLEEN SYSTEMS INC		X									X
FLD984171694	SAFETY-KLEEN SYSTEMS INC											X
FLD984261404	MERCURY RECYCLERS INTERNATIONAL INC	X										
FLD984262782	AERC RECYCLING SOLUTIONS A CLEAN EARTH COMPANY	X						X				X
FLR000009266	CLIFF BERRY INC - FORT PIERCE								X			
FLR000069062	WATER RECOVERY LLC							X	X			
FLR000070565	LIGHTING RESOURCES LLC	X										X
FLR000083071	CLIFF BERRY INC FORT LAUDERDALE											X
GAD000616367	MKC ENTERPRISES INC.											X
GAD000776781	SAFETY-KLEEN SYSTEMS, INC											X
GAD980709257	SAFETY-KLEEN SYSTEMS, INC (MACON)											X
GAD980839187	EMERALD TRANSFORMER PPM LLC			X								
GAD980842777	SAFETY-KLEEN SYSTEMS, INC											X
GAD980845077	UNIVAR SOLUTIONS USA LLC											X
GAD981265424	SAFETY-KLEEN SYSTEMS, INC (MORROW)											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
GAR000039776	EQ INDUSTRIAL SERVICES INC					X						X
GAR000061564	MCF ENVIRONMENTAL SERVICES INC					X						
GAR000078279	HERITAGE-CRYSTAL CLEAN LLC											X
GAR000084541	CLEAN HARBORS ENVIRONMENTAL SERVICES INC		X									
IAD022365480	NORTHLAND PRODUCTS COMPANY											X
IAD098027592	SAFETY-KLEEN SYSTEMS INC											X
IAD981718000	SAFETY-KLEEN SYSTEMS INC		X									X
IDD073114654	US ECOLOGY IDAHO INC SITE B			X				X	X	X		X
IDD075746271	ID UI MOSCOW											X
IDD981770498	SAFETY-KLEEN SYSTEMS INC NB											X
IDR000205476	P. KAY METAL LEWISTON LLC											X
IL0390055036	CLINTON LANDFILL 3								X			
ILD000666206	ENVIRITE OF ILLINOIS INC	X		X		X		X	X			X
ILD000805812	PEORIA DISPOSAL CO								X			
ILD000805911	SAFETY-KLEEN SYSTEMS INC		X			X						X
ILD005087630	SIMS RECYCLING SOLUTIONS INC	X										
ILD005121439	SIPI METALS CORP	X										X
ILD005123211	GOLD EAGLE CO											X
ILD005450697	CLEAN HARBORS RSC LLC		X									
ILD006493191	SCHIBER TRUCK CO											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
ILD010284248	CID RECYCLING & DISPOSAL FACILITY							X				
ILD025459157	DFG MERCURY CORP	X										
ILD040891368	BEFESA ZINC US INC.	X										
ILD052622917	SWAN SURFACES LLC											X
ILD053980272	MIDWEST SANITARY SVC INC											X
ILD064418353	BEAVER OIL CO INC		X	X		X		X	X			X
ILD095789319	BLOOMINGTON & NORMAL SAN DIST											X
ILD098642424	VEOLIA TECHNICAL SOLUTIONS LLC			X		X	X	X	X			X
ILD980613913	SAFETY KLEEN SYSTEMS INC		X	X		X		X				X
ILD981088388	SAFETY-KLEEN SYSTEMS INC			X								X
ILD981097819	SAFETY-KLEEN SYSTEMS INC											X
ILD981957236	SET ENVIRONMENTAL INC							X	X			X
ILD984785238	HAZCHEM ENVIRONMENTAL CORP (FORMERLY)					X						
ILD984831396	GFL ENV SERVICES USA INC		X									
ILD984887406	SAFETY KLEEN AT TP&W RR YARD											X
ILR000019588	ENVIROVAC WASTE TRANSPORT SYS INC					X						
ILR000107086	ILLINI ENVIRONMENTAL LLC											X
ILR000107581	ZIRON ENVIRONMENTAL SERVICES							X				
ILR000115287	LIQUID ENVIRONMENTAL SOLUTIONS								X			
ILR000130062	HERITAGE CRYSTAL CLEAN LLC					X		X	X			X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
ILR000149146	QUANTIX LIQUID TRANSPORTATION INC					X						
IN0000351387	LIGHTING RESOURCES LLC	X										X
IND000199653	ECOBAT RESOURCES INDIANA, LLC	X										
IND000646943	TRADEBE TREATMENT & RECYCLING LLC	X	X	X		X		X	X			X
IND000717959	GARFIELD FACILITY LLC	X										
IND000780403	RECLAIMED ENERGY INC., A DIVISION OF SUPERIOR INDUSTRIAL SOLUTIONS, INC.		X			X						X
IND005081542	HEIDELBERG MATERIALS US CEMENT LLC	X	X		X	X		X				X
IND005101217	CROSBIE FOUNDRY CO								X			
IND005146626	TRI-LAKES CONTAINER											X
IND005460209	MASON CORPORATION	X										
IND006052278	JUPITER COIL COATING DIVISION											X
IND006419212	LONE STAR GREENCASTLE WDF				X	X						X
IND046103420	PPG INDUSTRIES INCORPORATED											X
IND058484114	HERITAGE TRANSPORT LLC					X		X	X			X
IND077042034	SAFETY-KLEEN SYSTEMS, INC			X								
IND087038451	WOOD MIZER LLC								X			
IND093219012	HERITAGE ENVIRONMENTAL SERVICES LLC	X	X	X		X		X	X			X
IND980503890	HERITAGE ENVIRONMENTAL SERVICES LLC							X		X		X
IND981538838	QUALITY COATINGS INC											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
IND984868406	NEIER INCORPORATED											X
IND984868927	HENIFF TRANSPORTATION SERVICES											X
IND985046499	LIQUID WASTE REMOVAL INCORPORATED							X				X
INR000007799	CLEAN EARTH SPECIALTY WASTE SOLUTIONS INCORPORATED					X		X				X
INR000012674	MICRONUTRIENTS USA LLC			X								
INR000104224	SUPERIOR TRANSPORTATION LOGISTICS LLC		X									
INR000110197	CLEAN EARTH ENVIRONMENTAL SOLUTIONS INCORPORATED								X			X
INR000123497	TRADEBE TRANSPORTATION LLC		X	X		X						X
INR000124537	GFL ENVIRONMENTAL SERVICES USA											X
INR000125641	EQ INDUSTRIAL SERVICES INCORPORATED											X
INR000127621	REWORLD SOLUTIONS, LLC			X		X						X
INR000130658	VALICOR ENVIRONMENTAL SERVICES LLC											X
INR000134064	QUIKCUT INCORPORATED		X									
INR000136549	LAMAR & LAMAR INSURANCE LAMAR ENTERPRISES INCORPORATED											X
INR000145045	TAYLOR MADE SYSTEMS											X
INR000148742	CALDWELL ENVIRONMENTAL TRANSPORT, LLC							X				
KS0000336891	SAVANNAH TRANSP INC											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
KSD000809723	SAFETY-KLEEN SYSTEMS INC											X
KSD031203318	ASH GROVE CEMENT CO				X	X		X				X
KSD057889313	UNIVAR SOLUTIONS USA INC											X
KSD980633259	SYSTECH ENVIRONMENTAL CORPORATION		X	X		X		X				X
KSD981506025	EMERALD TRANSFORMER PPM LLC											X
KY0000967653	PERDUE ENVIRONMENTAL CONTRACTING CO. INC.(PECCO)											X
KYD005009923	CALGON CARBON CORPORATION			X				X				X
KYD006373922	PMC ORGANOMETALLIX, INC.											X
KYD053348108	SAFETY-KLEEN SYSTEMS, INC.		X	X		X		X				X
KYD981027469	SAFETY-KLEEN LEXINGTON		X									X
KYD985073196	AES ENVIRONMENTAL, LLC	X	X	X		X		X	X			X
KYR000031757	PARALLEL PRODUCTS OF KENTUCKY		X			X						
LA0000147272	CHEMICAL WASTE MANAGEMENT INC - LAKE CHARLES TRANSPORTATION											X
LA0000365668	LEI, INC.	X				X						X
LAD000777201	CHEMICAL WASTE MANAGEMENT INC			X		X		X	X	X		X
LAD008161234	ECO SERVICES OPERATIONS, CORP				X							X
LAD010395127	CLEAN HARBORS BATON ROUGE LLC		X					X	X			X
LAD980622161	EVONIK CORPORATION	X		X								X
LAD981055791	CLEAN HARBORS OF COLFAX LLC											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
LAD985174234	HERITAGE-CRYSTAL CLEAN, LLC											X
LAR000036566	ACTION PRESS											X
LAR000055467	LEI INC					X						X
LAR000077560	LEI, INC.	X										X
LAR000083329	AMERICAN RECOVERY LLC											X
LAR000087254	XPRESS RECYCLING INC			X								
LAR000101153	OMNI ENERGY SERVICES CORP					X						X
MAC300016672	TRIUMVIRATE ENVIRONMENTAL INC											X
MAC300017498	VEOLIA ES TECHNICAL SOLUTIONS LLC	X		X		X		X				X
MAC300092749	TRIUMVIRATE ENVIRONMENTAL MERRIMACK INC											X
MAC300096278	GRAF BROTHERS LEASING INC											X
MAC300098399	NRC EAST ENVIRONMENTAL SERVICES INC							X				X
MAC300108495	PC SURVIVORS OF MASSACHUSETTS LLC	X										
MAD039322250	CLEAN HARBORS ENVIRONMENTAL SERVICES INC					X		X				X
MAD047075734	TRIUMVIRATE ENVIRONMENTAL MERRIMACK INC	X		X		X		X	X			X
MAD052629979	GLINES & RHODES INC							X				
MAD053452637	CLEAN HARBORS OF BRAINTREE INC		X	X		X			X			X
MAD060095569	SAFETY KLEEN SYSTEMS INC											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
MAD062179890	TRADEBE TREATMENT AND RECYCLING OF STOUGHTON					X		X	X			X
MAD066588005	MURPHYS WASTE OIL SERVICE INC			X								X
MAD082303777	CYN OIL CORPORATION								X			X
MAD084814136	EQ NORTHEAST INC								X			X
MAD088978143	SAFETY KLEEN SYSTEMS INC											X
MAD089353023	FRANK CORP											X
MAD096287354	SAFETY KLEEN SYSTEMS INC											X
MAD128422870	METALOR TECHNOLOGIES USA (RE)	X										
MAD980915755	COMPLETE RECYCLING SOLUTIONS LLC	X		X								X
MAD985286343	COVANTA HAVERHILL INC											X
MAR000501502	CHICOPEE DEPT OF PUBLIC WORKS											X
MAR000563890	SPLASH PRODUCTS											X
MAR000588392	WALTHAM HIGH SCHOOL											X
MDD093002384	TRIUMVIRATE ENVIRONMENTAL - BALTIMORE, LLC	X										
MDD980555189	CLEAN HARBORS OF BALTIMORE INC.	X		X		X		X	X			X
MDD981034291	SAFETY-KLEEN SYSTEMS INC		X									X
MDR000001057	STERICYCLE INC											X
MDR000507863	VALICOR ENVIRONMENTAL SERVICES LLC					X						
MDR000518423	ACM TECHNOLOGIES, INC.	X		X				X				X
MDR000524712	ECOLOGY SERVICES, INC											X

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		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
MDR000527705	BROADVIEW WASTE SOLUTIONS											X
MED019051069	NRC ENVIRONMENTAL OF MAINE, INC.							X				X
MED980672182	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.			X				X				X
MID000722157	DTE ELECTRIC COMPANY - WARREN SERVICE CENTER							X	X			X
MID000724831	MICHIGAN DISPOSAL WASTE TREATMENT PLANT	X	X			X		X	X			X
MID005338801	GAGE PRODUCTS CO		X	X								X
MID006017966	ANCHOR LAMINA AMERICA INC											X
MID029631686	VESCO OIL CORP		X									
MID048090633	WAYNE DISPOSAL INC			X				X	X	X		X
MID057002602	VALICOR ENVIRONMENTAL SERVICES LLC							X				
MID058721788	B F I WASTE SYSTEMS OF NORTH AMERICA INC											X
MID059912956	SQS INC DBA ENVIRONMENTAL RECYCLING GROUP								X			X
MID074259565	US ECOLOGY MICHIGAN INC			X		X		X	X			X
MID083684290	AURORIUM ZEELAND LLC					X						X
MID092947928	DLD ENVIRONMENTAL SERVICES INC	X	X	X		X		X	X			X
MID980615298	PETRO-CHEM PROCESSING GROUP OF NORTRU LLC	X	X	X		X		X	X			X
MID980991566	EQ DETROIT INC	X	X	X		X		X	X		X	X
MID981000607	SAFETY KLEEN SYSTEMS INC			X		X						
MID981200835	SYSTECH ENVIRONMENTAL CORP					X						

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		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
MID985566629	AEVITAS SPECIALTY SERVICES CORP							X				
MID985663251	SAFETY KLEEN SYSTEMS INC											X
MIK103800723	EVOQUA WATER TECHNOLOGIES LLC							X				
MIK191728925	D & B ENVIRONMENTAL TRANSPORTATION INC		X	X								
MIK215986548	RADIOLOGY IMAGING SOLUTIONS INC	X										
MIK435642742	EQ INDUSTRIAL SERVICES INC	X	X					X	X			X
MIK593743838	US ECOLOGY TRANSPORTATION SOLUTIONS INC DBA US ECOLOGY							X	X			X
MIK939928313	EQ INDUSTRIAL SERVICES											X
MIR000012104	GRAND BLANC PROCESSING											X
MIR000014530	CLEAN HARBORS ENVIRONMENTAL SERVICES INC											X
MIR000016055	REPUBLIC INDUSTRIAL & ENERGY SOLUTIONS LLC										X	X
MIR000016402	USA LAMP & BALLAST RECYCLING INC DBA CLEANLITES RECYCLING INC	X										
MIR000022772	VEOLIA ES TECHNICAL SOLUTIONS LLC							X				X
MIR000047092	VESCO OIL CORPORATION		X									
MND000686709	UNIVAR SOLUTIONS USA INC.		X									X
MND006148092	GOPHER RESOURCE	X						X	X			
MND006213664	BRENNTAG GREAT LAKES LLC		X									X
MND044176113	PIONEER TANK LINES INC	X				X		X				

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		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
MND055458723	RECYCLE TECHNOLOGIES INC	X										
MND079714804	LOES OIL CO					X						
MND980996805	ENVIRO-CHEM INC	X						X				
MND981097884	SAFETY-KLEEN SYSTEMS INC - EAGAN											X
MND981098478	EVOQUA WATER TECHNOLOGIES LLC	X	X	X				X	X			X
MND981101314	MAGUIRE REFINING INC	X										
MND981953045	SAFETY-KLEEN SYSTEMS INC - BLAINE, SAFETY-KLEEN SYSTEMS INC		X			X						X
MND982205437	BAY WEST INC					X						
MND982428344	AMERICAN CYLINDER DBA ALLSAFE			X								X
MNR000033597	COMO LUBE & SUPPLIES INC - DULUTH		X									
MNR000055988	OSI ENVIRONMENTAL INC					X						
MNR000078675	RETROFIT COMPANIES INC - LITTLE CANADA	X		X								
MNS000109785	STERICYCLE SPECIALTY WASTE SOLUTIONS - BLAINE	X		X		X						X
MNS000110924	CLEAN EARTH SPECIALTY WASTE SOLUTIONS, INC.		X			X		X				X
MNS000153460	OCEANTECH	X										
MNT280011586	OSI ENVIRONMENTAL INC - EVELETH	X		X				X				X
MOD000610766	SOLVENT RECOVERY LLC	X	X	X		X		X				X
MOD000669051	SAFETY KLEEN SYSTEMS INC											X
MOD000669069	SAFETY KLEEN SYSTEMS INC		X									X
MOD030712822	FOREST CITY FACILITY LLC	X						X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
MOD054018288	GREEN AMERICA RECYCLING LLC		X		X	X		X				X
MOD059200089	BUICK RESOURCE RECYCLING FACILITY LLC THE	X										X
MOD071999783	UNIVERSITY OF MISSOURI ST LOUIS											X
MOD095038998	BED ROCK INC DBA TRI STATE MOTOR TRANSIT CO					X						X
MOD095486312	SAFETY KLEEN SYSTEMS INC											X
MOD980971626	SAFETY KLEEN SYSTEMS INC		X									X
MOD980973564	SAFETY KLEEN SYSTEMS INC											X
MOD981123391	HAZMAT INC					X		X	X			X
MOD981127319	LONE STAR INDUSTRIES INC				X	X		X				X
MOD981505555	HERITAGE ENVIRONMENTAL SVCS LLC	X	X	X		X		X	X		X	X
MOD985798164	EBV EXPLOSIVES ENVIRONMENTAL COMPANY						X					X
MOR000556985	VEOLIA ES TECHNICAL SOLUTIONS LLC					X						
MSD000776765	SAFETY-KLEEN SYSTEMS, INC.		X									X
MSD985979590	M&E OIL SERVICE			X								
MSR000108027	FEDEX SERVICES - PACKAGE RESEARCH & RECOVERY					X			X			X
NCD000648451	CLEAN HARBORS REIDSVILLE, LLC	X		X		X		X	X			X
NCD000776740	SAFETY-KLEEN SYSTEMS, INC											X
NCD061263315	UNIVAR SOLUTIONS USA INC.					X						X
NCD077840148	SAFETY-KLEEN SYSTEMS, INC											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
NCD079060059	SAFETY-KLEEN SYSTEMS, INC											X
NCD095119210	METALLIX REFINING INC.	X							X			X
NCD121700777	AERC ACQUISITION CORPORATION D/B/A DART, A CLEAN EARTH COMPANY					X		X				X
NCD980799142	STAT INCORPORATED							X				X
NCD980842132	ECOFLO, INC		X	X		X		X				X
NCD980846935	SAFETY-KLEEN SYSTEMS, INC											X
NCD986166338	VEOLIA ES TECHNICAL SOLUTIONS, LLC		X			X			X			X
NCR000163188	REWORLD ASHEBORO, INC					X						
NDD000716738	SAFETY-KLEEN SYSTEMS, INC. - FARGO											X
NDD980957070	SAFETY-KLEEN SYSTEMS, INC.											X
NDR000003111	SABIN METAL WEST CORPORATION	X										
NDR000015149	ROOSEVELT GAS PLANT											X
NED053316535	SAFETY-KLEEN SYSTEMS INC											X
NED981495724	SAFETY-KLEEN SYSTEMS INC		X									X
NED981723513	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.	X	X	X		X	X	X	X			X
NER000003525	CVS PHARMACY #5634											X
NH5986485852	ENVIRONMENTAL SOIL MGMT INC											X
NHD510072044	NORTH COAST SERVICES LLC	X										
NHD510177926	COLT REFINING INC	X							X			

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
NHD980521843	TRADEBE TREATMENT & RECYCLING NORTHEAST LLC											X
NJD000692061	ENVIRONMENTAL TRANSPORT GROUP INC											X
NJD000768101	SAFETY KLEEN SYSTEMS INC											X
NJD002182897	SAFETY KLEEN SYSTEMS INC		X	X		X						X
NJD002200046	CYCLECHEM INC	X	X	X		X		X	X			X
NJD002454544	VEOLIA ES TECHNICAL SOLUTIONS LLC		X			X		X				X
NJD003812047	ACV ENVIRONMENTAL SERVICES INC.		X			X		X	X			X
NJD011370525	G&S MOTOR EQUIPMENT CO INC	X										X
NJD054126164	FREEHOLD CARTAGE, INC.					X		X	X			X
NJD071629976	S J TRANSPORTATION CO INC					X						
NJD080631369	VEOLIA ES TECHNICAL SOLUTIONS CORP		X			X		X	X			X
NJD980536593	VEOLIA ES TECHNICAL SOLUTIONS LLC	X	X	X		X		X	X			X
NJD980755367	JOHNSON MATTHEY, INC.	X										
NJD986610335	ELECTRUM RECOVERY WORKS INC	X										
NJD991291105	CLEAN EARTH OF NORTH JERSEY					X			X			X
NJR000064766	CEMCO CUSTOM ENVIRONMENTAL MGMT CO INC					X		X				X
NJR000074898	TECH RECYCLERS LLC	X										
NJR986628162	IWT TRANSPORT, INC.								X			
NJR986657120	BMB PROPERTIES AND MANAGEMENT											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
NMD000134247	WESTERN REFINING TERMINALS, LLC - ALBUQUERQUE ASPHALT TERMINAL											X
NMD000804294	SAFETY-KLEEN SYSTEMS, INC.											X
NMD002208627	ADVANCED CHEMICAL TREATMENT LLC		X	X		X		X				X
NMD980698849	SAFETY-KLEEN SYSTEMS, INC.											X
NMR000026021	ADVANCED CHEMICAL TRANSPORT LLC											X
NVD048946016	US ECOLOGY INC RADIOACTIVE WASTE SITE											X
NVD980893663	RENO DRAIN OIL SERVICE											X
NVD980895338	21ST CENTURY ENVIRONMENTAL MANAGMENT OF NEVADA, LLC.	X	X	X		X		X	X			X
NVD982358483	BEST ENVIRONMENTAL LLC					X						
NVR000001032	THERMO FLUIDS INC			X								
NVR000001925	THERMO FLUIDS INC			X								
NVR000066837	SAFETY KLEEN SYSTEMS, INC.											X
NVR000080655	SAFETY KLEEN SYSTEMS INC			X								
NVR000088427	ROADRUNNER GLYCOL INC					X						
NVT330010000	US ECOLOGY NEVADA, INC	X	X	X		X		X	X	X		X
NYD001526060	ZIERICK MFG CORP	X										
NYD013277454	SOLVENTS & PETROLEUM SERVICE INC			X		X						X
NYD030485288	ECOBAT RESOURCES NEW YORK LLC	X										
NYD044825636	MURPHYS WASTE OIL SERVICE INC											X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
NYD049253719	UNIVAR SOLUTIONS USA INC			X		X		X	X			X
NYD049836679	CWM CHEMICAL SERVICES LLC							X				
NYD067919340	SABIN METAL CORP	X										X
NYD077444263	TRIUMVIRATE ENVIRONMENTAL NYC LLC											X
NYD980753784	SAFETY-KLEEN SYSTEMS INC					X						X
NYD980769947	HAZMAT ENVIRONMENTAL GROUP INC		X									X
NYD981556541	SAFETY-KLEEN SYSTEMS INC											X
NYD982717779	NIAGARA FALLS WASTE WATER TREATMENT PLANT							X				
NYD982743312	SAFETY-KLEEN SYSTEMS INC		X									X
NYD982743684	GENESEE MONROE RACING ASSOCIATION INC - WEST REGIONAL OFF-TRACK BETTING CORP											X
NYD986872869	SAFETY-KLEEN SYSTEMS INC											X
NYD986908085	MILLER ENVIRONMENTAL GROUP INC											X
NYD986930543	COVANTA NIAGARA LP											X
NYD986969947	PAGE E T C INC					X						X
NYN008024069	HYLAND LANDFILL								X			
NYR000005298	INDUSTRIAL OIL TANK SERVICE CO					X						X
NYR000030809	AMERICAN RECYCLERS CO INC	X										X
NYR000115733	MEG SYRACUSE											X
NYR000176859	NYCT - HESTER STREET SUBSTATION							X				

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
NYR000176958	SUN ENVIRONMENTAL CORP							X				
NYR000184986	ROCHESTER SILVER WORKS LLC	X										
NYR000192005	AMERICAN LAMP RECYCLING LLC	X										
NYR000237487	APPROVED STORAGE & WASTE HAULING II INC		X									X
NYR000242891	LI-CYCLE INC	X										
OH0000000539	MIDWEST ENVIRONMENTAL TRANSPORT INC											X
OH0000553875	SELECT TRANSPORTATION INC											X
OHD000724153	CLEAN HARBORS ENVIRONMENTAL SERVICES INC		X	X		X		X				X
OHD000816629	SPRING GROVE RESOURCE RECOVERY INC	X	X	X		X		X	X			X
OHD001851534	RUMPKE CONTAINER SERV INC											X
OHD001926740	CHEMTRON CORPORATION											X
OHD004274031	VALICOR ENVIRONMENTAL SERVICES LLC	X	X					X				X
OHD005048947	SYSTECH ENVIRONMENTAL CORP		X			X						X
OHD017730540	ENVIROSERVE INC											X
OHD020273819	VICKERY ENVIRONMENTAL INC							X	X		X	X
OHD042319244	AMG VANADIUM LLC	X										
OHD045243706	ENVIROSAFE SERVICES OF OHIO INC							X	X	X		X
OHD048415665	ROSS INCINERATION SERVICES INC	X	X	X		X	X	X	X			X
OHD066060609	CHEMTRON CORP	X	X	X		X		X	X			X
OHD071654958	CIRBA SOLUTIONS US INC	X		X								X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
OHD074700311	UNIVAR SOLUTIONS USA INC	X				X						X
OHD077772895	VEXOR TECHNOLOGY INC			X				X				X
OHD093945293	VEOLIA ES TECHNICAL SOLUTIONS LLC	X	X			X		X	X			X
OHD980568992	ENVIRITE OF OHIO INC	X	X	X				X	X			X
OHD980587364	CLEAN HARBORS RECYCLING SERVICES OF OHIO LLC		X	X		X		X				X
OHD980613541	HERITAGE THERMAL SERVICES INC	X	X	X		X	X	X	X			X
OHD980614374	ROSS TRANSPORTATION SERVICES INC											X
OHD980701072	METALLIC RESOURCES INC	X										
OHD980821862	KLOR KLEEN							X				X
OHD980897656	CHEMICAL SOLVENTS INC		X			X						X
OHD981000920	CAPITAL CITY ROAD OIL INC			X								
OHD981099401	SAFETY-KLEEN SYSTEMS INC		X									
OHD986975399	EMERALD TRANSFORMER PPM LLC	X										X
OHD986976348	AGMET LLC	X		X								X
OHD986983401	OMEGA HARVESTED METALLURGICAL	X										
OHD986999480	RECYCLING COORDINATORS INC	X										
OHD987015229	GLYCERIN TRADERS LLC		X									
OHD987034667	CENTRAL OHIO OIL INC					X						X
OHD987048212	CARBON LIMESTONE LANDFILL BFI OF OHIO INC								X			X
OHD987048733	HOLCIM (US) INC				X							
OHR000029561	VEOLIA WATER TECHNOLOGIES INC			X								

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
OHR000034025	LAMPS INC DBA ENVIRONMENTAL RECYCLING	X				X						
OHR000038513	CIRBA SOLUTIONS US INC	X										
OHR000108050	USA LAMP & BALLAST RECYCLING INC DBA CLEANLITES RECYCLING INC	X										
OHR000109819	USA LAMP & BALLAST RECYCLING INC	X										X
OHR000153403	METALLIC RESOURCES INC	X										
OHR000161299	AGMET LLC	X		X				X				
OHR000162800	UNIVAR SOLUTIONS USA INC	X										
OHR000184267	SKYE METAL RECOVERY INC	X										
OHR000200097	SES-R1 LLC DBA RESOURCE ONE	X		X								
OHR000200386	VALICOR ENVIRONMENTAL SERVICES LLC							X				
OHR000209619	ARDLEIGH MINERALS INC											X
OHR000214502	SES-R1 LLC DBA RESOURCE ONE					X						
OKD000402396	US ECOLOGY TULSA, INC	X		X		X		X	X		X	X
OKD000763821	SAFETY-KLEEN SYSTEMS, INC					X						X
OKD008010076	AAON, INC.											X
OKD064558703	TULSA CEMENT LLC D/B/A CENTRAL PLAINS CEMENT COMPANY				X							
OKD065438376	CLEAN HARBORS LONE MOUNTAIN LLC	X						X	X	X	X	X
OKD144420981	COVANTA TULSA RENEWABLE ENERGY											X
OKD980878474	SAFETY-KLEEN SYSTEMS, INC		X									X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
OKD982293334	ENVIRONMENTAL MANAGEMENT, INC.											X
OKD987084068	CLEAN EARTH SPECIALTY WASTE SOLUTIONS, INC.											X
OKD987097151	EURECAT US (WAS TRICAT INC.)	X		X								
OKR000023838	NEO RARE METALS (OKLAHOMA), LLC.	X										
OKR000025452	SYSTECH ENVIRONMENTAL CORP					X						X
OKR000031492	BASIN TRANSPORTATION LLC											X
ORD089452353	CHEMICAL WASTE MANAGEMENT OF THE NW		X	X		X		X	X	X		X
ORD981766124	SAFETY-KLEEN SYSTEMS INC		X									X
ORD987173457	COLUMBIA RIDGE LDFL & RECYCLING CTR								X			
ORQ000007781	THERMO FLUIDS, INC			X								
ORQ000025197	THERMO FLUIDS INC											X
PA0000453084	BETHLEHEM APPARATUS CO INC	X							X			
PAD000736942	CALGON CARBON CORP			X				X				
PAD000738823	SAFETY-KLEEN SYSTEMS INC											X
PAD000738849	SAFETY KLEEN SYSTEMS INC											X
PAD000797548	GFL ENVIRONMENTAL SERVICES USA INC	X	X			X						X
PAD002389559	KEYSTONE CEMENT CO					X						X
PAD002390961	BETHLEHEM APPARATUS CO INC	X							X			
PAD002395887	BEFESA ZINC US INC (F/K/A AMERICAN ZINC RECYCLING CORP)	X										X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
PAD004835146	MAX ENVIRONMENTAL TECHNOLOGIES INC YUKON FAC								X			
PAD010154045	ENVIRITE OF PENNSYLVANIA INC	X				X		X	X			X
PAD014146179	ELDREDGE INC											X
PAD049617822	PYROMET INC	X						X				X
PAD067098822	CYCLECHEM INC		X	X		X		X	X			X
PAD085690592	CLEAN EARTH OF HATFIELD PA LLC	X	X	X		X		X	X			X
PAD087561015	THE INTL METALS RECLAMATION CO LLC	X										X
PAD980707442	HERITAGE TRANSPORT LLC			X								
PAD981038227	WORLD RESOURCES CO	X				X		X	X			X
PAD981736143	SAFETY-KLEEN SYSTEMS INC											X
PAD981737109	SAFETY-KLEEN SYSTEMS INC											X
PAD982576258	SAFETY-KLEEN SYSTEMS INC											X
PAD982661381	REPUBLIC ENV SYS LLC	X				X		X	X			X
PAD987266715	SAFETY KLEEN SYSTEMS INC											X
PAD987266749	VLS LANCASTER LLC		X	X		X						X
PAD987270725	DESOTEC US LLC			X				X				X
PAD987367216	AERC RECYCLING SOLUTIONS	X		X				X	X			X
PAD987388881	COVANTA DELAWARE VALLEY LP							X				
PAR000042341	EAP INDUSTRIES INC								X			
PAR000043026	REWORLD MYERSTOWN LLC											X
PAR000521294	ABINGTON RELDAN METALS LLC	X										X

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		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
PAR000521740	AMERICAN TRANSPORTATION SOLUTIONS LLC											X
PAR000522318	AERC RECYCLING SOLUTIONS	X						X				X
PAR000524041	US ENV INC					X						X
PAR000533521	CHESAPEAKE WASTE SOLUTIONS LLC											X
PAR000545178	SIOUX SERVICES LLC											X
PRD090399718	SAFETY KLEEN ENVIROSYSTEMS CO OF PR INC		X					X				X
RID040098352	NORTHLAND ENVIRONMENTAL LLC	X		X		X		X	X			X
RID050322130	KELLEY METALS CORP	X										
RID059735761	ADVANCED CHEMICAL COMPANY	X		X				X				X
RID084802842	SAFETY-KLEEN SYSTEMS, INC.	X		X				X				X
RID095978995	GEIB REFINING CORP	X										
RID981886104	GANNON AND SCOTT INC.	X										X
RID987474269	AIM PRODUCTS LLC	X										
RIR000500025	WESTERN OIL INC		X	X				X				X
RIR000508457	21ST CENTURY ENVIRONMENTAL MANAGEMENT, LLC OF RI		X					X				
RIR000509620	MORGAN MILL METALS, LLC	X										
SCD003351699	GIANT CEMENT COMPANY				X	X		X				X
SCD036275626	GIANT RESOURCE RECOVERY SUMTER INC	X	X	X		X		X	X			X
SCD070371885	PHIBRO TECH INC			X								
SCD077995488	SAFETY KLEEN SYSTEMS INC		X			X		X				X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
SCD981031040	SAFETY KLEEN SYSTEMS INC GREER							X				
SCD987597127	CLEAN MANAGEMENT ENVIRONMENTAL GROUP INC											X
SCR000006304	EAGLE ENVIRONMENTAL SERVICES INC											X
SCR000762468	VLS RECOVERY SERVICES LLC											X
SCR000767814	CLEANLITES RECYCLING SOUTH LLC	X										
SCR000770073	KILNDIRECT INC		X									
SCR000770297	WM LAMPTRACKER INC							X				
SCR000771618	BEFESA ZINC US INC.	X										X
SDD000716696	SAFETY-KLEEN SYSTEMS, INC.											X
TN0001577485	SUNBELT SOLOMON SERVICES, LLC											X
TND000614321	SAFETY-KLEEN SYSTEMS, INC., MILLINGTON											X
TND000645770	CLEAN HARBORS TENNESSEE, LLC											X
TND000646612	HERAEUS PRECIOUS METALS NORTH AMERICA, LLC	X										
TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC	X	X	X		X		X	X			X
TND980847024	EXCEL TSD OF TN, LLC	X		X		X		X	X			X
TND981474125	SAFETY-KLEEN SYSTEMS, INC., NASHVILLE											X
TND981920119	VLS - ARMOR, LLC					X						X
TND981922644	A. R. PAQUETTE	X										
TND982086969	TOXCO MATERIAL MANAGEMENT CENTER (TMMC)											X

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		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
TND982109142	DIVERSIFIED SCIENTIFIC SERVICES INC. (DSSI)				X			X	X			X
TND982141392	CLEAN HARBORS CHATTANOOGA, LLC			X				X				X
TND982144099	BEFESA ZINC U.S. INC.	X										X
TND982157570	ENERGYSOLUTIONS, INC.							X	X			X
TND987777695	SAFETY-KLEEN SYSTEMS, INC., KNOXVILLE					X						X
TNR000008250	RECYCLE AEROSOL, LLC											X
TNR000022277	MASTERMELT AMERICA, LLC	X										
TNR000024273	LIGHTING RESOURCES, LLC											X
TNR000039925	LIGHTING RESOURCES, LLC											X
TNR000042119	LIGHTING RESOURCES LLC	X										
TXD000719286	LBC HOUSTON BAYPORT TERMINAL											X
TXD000719518	TM DEER PARK SERVICES					X		X			X	X
TXD000729400	SAFETY KLEEN SYSTEMS							X				X
TXD000747378	SAFETY-KLEEN SYSTEMS					X		X				X
TXD000838896	VEOLIA ES TECHNICAL SOLUTIONS	X	X	X		X	X	X	X		X	X
TXD008029191	LIGHTING RESOURCES	X		X								X
TXD008099079	ECO SERVICES OPERATIONS HOUSTON PLANT				X			X			X	X
TXD010791184	LONESTAR ECOLOGY			X		X		X				X
TXD010803203	SAFETY-KLEEN MISSOURI CITY 6 073 02		X					X				X
TXD046844700	CHEMICAL RECLAMATION SERVICES AVALON FACILITY	X	X			X		X				X
TXD055135388	SET ENVIRONMENTAL	X	X	X		X		X	X			X

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Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
TXD055141378	CLEAN HARBORS DEER PARK	X	X	X		X	X	X			X	X
TXD062287883	SAFETY KLEEN ABILENE 6 002 01							X				X
TXD069452340	US ECOLOGY TEXAS	X	X	X		X		X	X	X	X	X
TXD074195678	GLADIEUX METALS RECYCLING	X										
TXD074196338	PHILLIP RECLAMATION SERVICES HOUSTON	X		X		X		X				X
TXD077603371	SAFETY-KLEEN SYSTEMS DENTON RECYCLE CENTER		X	X		X						X
TXD083145656	SAFETY KLEEN SYSTEMS							X				X
TXD086977352	GULF COAST WASTE DISPOSAL WASHBURN TUNNEL FACILITY							X				
TXD097673149	VOPAK LOGISTICS SERVICES USA DEER PARK					X		X			X	X
TXD102599339	CLEAN EARTH ENVIRONMENTAL SOLUTIONS							X				
TXD106829963	EURECAT US	X		X								
TXD980626170	GULF COAST WASTE DISPOSAL BAYPORT FACILITY							X				
TXD980745095	UNIVAR SOLUTIONS USA					X						X
TXD980748461	STOLTHAVEN HOUSTON							X				
TXD980811046	CLEAN EARTH SPECIALTY WASTE SOLUTIONS					X						X
TXD980876015	SAFETY-KLEEN WACO							X				X
TXD981052061	SAFETY KLEEN SYSTEMS IRVING							X				X
TXD981053416	SAFETY KLEEN SYSTEMS FORT WORTH							X				X
TXD981053770	CLEAN HARBORS SAN LEON	X		X				X				X

Exhibit B-3
Commercial Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
TXD981056690	SAFETY-KLEEN SYSTEMS MIDLAND							X				X
TXD981514383	ALPHA OMEGA RECYCLING FACILITY	X		X				X				X
TXD982290140	CLEAN HARBORS LAPORTE	X	X			X		X	X			X
TXD982560294	NSSI RECOVERY SERVICES		X	X		X		X	X			X
TXD988088464	WASTE CONTROL SPECIALISTS							X	X	X		X
TXR000001016	TM CORPUS CHRISTI SERVICES							X			X	
TXR000031286	INTERGULF							X				X
TXR000034231	ESR ELECTRONICS INC											X
TXR000036731	US ECOLOGY WINNIE					X						X
TXR000043869	COVEL GARDENS LANDFILL AND RECYCLING CEN											X
TXR000053306	INMAR RX SOLUTIONS											X
TXR000056192	TECHEMET	X										
TXR000059303	SAFETY-KLEEN SYSTEMS											X
TXR000063099	PARAGON SOUTHWEST MEDICAL WASTE					X						X
TXR000079350	BASF CALDWELL	X										
TXR000080110	PHOENIX INDUSTRIAL WATER WORKS			X								X
TXR000080711	ALX INDUSTRIES LLC	X										
TXR000081205	SAFETY-KLEEN SYSTEMS		X			X		X				X
TXR000084600	FORT BEND REGIONAL LANDFILL											X
TXR000084604	BFI ITASCA GARDENS					X						
TXR000084621	SEABREEZE ENVIRONMENTAL LANDFILL											X

Exhibit B-3
Commercial Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
TXR000084637	WASTE MANAGEMENT OF TEXAS INC - COASTAL PLAINS RECYCLING & DISPOSAL FACILITY											X
TXR000084700	DELTA WATER PROCESSING			X				X				
TXR000084869	UNIVAR SOLUTIONS USA THE WOODLANDS		X			X						X
TXR000085199	VLS HOUSTON					X		X				X
UTD048406144	UNIVAR SOLUTIONS USA INC		X			X			X			X
UTD153969019	GREENWOOD MOTOR LINES DBA R+L CARRIERS					X						
UTD980957088	SAFETY-KLEEN SYSTEMS, INC.											X
UTD981552177	CLEAN HARBORS ARAGONITE, LLC	X		X		X	X	X	X			X
UTD982595795	CLEAN HARBORS CLIVE, LLC		X									X
UTD982598898	ENERGYSOLUTIONS CLIVE FACILITY							X	X	X	X	X
UTD988078150	STERICYCLE, INC.											X
UTD991301748	CLEAN HARBORS GRASSY MOUNTAIN	X		X				X	X	X		X
UTP000001675	MOUNTAIN STATES INDUSTRIAL SERVICES											X
UTP000001678	ELBERTA COMPRESSOR STATION											X
UTR000000687	ECDC ENVIRONMENTAL L.C.											X
UTR000007138	VEOLIA ES TECHNICAL SOLUTIONS, LLC											X
VA0000122994	SHAMROCK ENVIRONMENTAL CORPORATION							X	X			
VAD000737346	SAFETY-KLEEN SYSTEMS, INC.											X
VAD000737361	SAFETY-KLEEN SYSTEMS, INC.											X

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Commercial Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
VAD981043011	SAFETY-KLEEN SYSTEMS, INC.											X
VAR000004721	C&M INDS INC							X				
VAR000503656	BLUE RIDGE SOLVENTS & COATINGS, INC		X									
VAR000503920	MXI ENVIRONMENTAL SERVICES LLC											X
VTD000791699	SAFETY-KLEEN SYSTEMS INC											X
VTR000517052	US ECOLOGY BURLINGTON, INC.	X	X	X		X		X	X			X
VTR000524868	GLOBALFOUNDRIES US 2 LLC-VERMONT FACILITY								X			
WAD009492877	EMERALD SERVICES INC E MARGINAL WAY	X	X									
WAD020257945	BURLINGTON ENVIRONMENTAL LLC TACOMA					X		X	X		X	X
WAD058367152	EMERALD SERVICES, INC. - AIRPORT WAY SEATTLE FACILITY			X								X
WAD980976906	HALLMARK REFINING CORP	X										
WAD981769110	EMERALD SERVICES, INC. - TACOMA FACILITY		X	X		X			X			X
WAD988466629	BERRY & SMITH TRUCKING LTD	X										
WAD991281767	BURLINGTON ENVIRONMENTAL LLC KENT							X	X			X
WAH000026371	ECOLIGHTS NORTHWEST			X								
WAH000042595	SAFETY KLEEN SYSTEMS INC											X
WAH000047370	PACIFIC NORTHWEST TERMINALS INC											X
WAH000055713	GRAYMAR ENVIRONMENTAL SERVICES INC											X
WAR000010355	PERMA FIX NORTHWEST RICHLAND INC							X	X			X

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Commercial Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
WAR000011999	TOXCO WASTE MANAGEMENT LTD	X										
WI0000815381	CONVANTA ENVIRONMENTAL SOLUTIONS CARRIERS II LLC											X
WI0000934174	AURA II INC	X										
WI0360007298	USVA WILLIAM S MIDDLETON MEMORIAL HOSPITAL											X
WID000780361	MILWAUKEE COUNTY MSD SOUTH SHORE PLT							X				
WID000808824	HYDRITE CHEMICAL CO		X			X		X				X
WID003967148	VEOLIA ES TECHNICAL SOLUTIONS, LLC	X		X		X		X	X			X
WID006085781	REWORLD SOLUTIONS, LLC											X
WID006136220	WAUSAU CHEMICAL CORP					X						
WID023350192	BRENNTAG GREAT LAKES LLC-RECLAIM		X			X		X				X
WID080509359	HYDRITE CHEMICAL CO - WEST											X
WID084106137	HYDRITE CHEMICAL CO		X	X								
WID981097769	SAFETY-KLEEN SYSTEMS INC											X
WID981187297	SAFETY-KLEEN SYSTEMS INC		X			X						X
WID988566543	VEOLIA ES TECHNICAL SOLUTIONS LLC	X				X		X				X
WID988580056	TRADEBE TREATMENT AND RECYCLING OF WI LLC	X	X	X		X		X	X			X
WID988615613	EMCO CHEMICAL DISTRIBUTORS INC					X						X
WID988642724	RECYCLE TECHNOLOGIES INC	X										
WID990829475	WRR ENVIRONMENTAL SERVICES CO INC	X	X	X		X		X	X			X
WIR000000356	WM WASTE INC	X						X				X

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Commercial Management Facilities

Handler ID	Handler Name	RECOVERY				TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Metals Recovery	Organics Recovery	Inorganics Recovery	Energy Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Deepwell Injection	
WIR000125831	LAMP RECYCLERS INC	X										
WIR000138016	LAKE DENOON TRANSPORT LLC											X
WIR000140988	VLS MILWAUKEE LLC											X
WIR000142877	ENVIRO-SAFE RESOURCE RECOVERY					X						X
WIR000147397	OSI ENVIRONMENTAL INC											X
WIR000155135	HYDRITE CHEMICAL CO					X						X
WIR000165399	REWORLD MILWAUKEE, LLC											X
WIR000174946	EARTH ENVIRONMENTAL LLC							X				
WVD981034101	SAFETY-KLEEN SYSTEMS, INC.											X
WVD981107600	CLEAN EARTH OF MORGANTOWN			X		X		X				X
WVD988770673	ENVIRONMENTAL PROTECTION SERVICES			X				X				X
WVR000525493	VALICOR ENVIRONMENTAL SERVICES LLC							X				
WYR000217588	SAFETY-KLEEN SYSTEMS, INC.											X
WYR000220814	KERN RIVER MUDDY CREEK COMP STATION											X

Appendix C
CAP Management Categories

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CAP Management Categories

For each of the CAP management categories, the main technologies used for each category are described, including the types of waste recovered, treated, or disposed. Each CAP management category is comprised of a number of waste management technologies that are generally interchangeable for managing broad types of wastes based on treatment performance.

METALS RECOVERY

Metals recovery technologies are designed to separate desired metals from other constituents of hazardous wastes. The most common technologies, which are described below, are high-temperature metals recovery, retorting, secondary smelting, ion exchange, and acid leaching.

High-temperature metals recovery is used to treat hazardous wastes that contain metals such as cadmium, chromium, lead, nickel, and zinc compounds. Metals are separated from the waste at high temperatures through a thermochemical-process using carbon, limestone, and silica as the chemical agents. The constituents being recovered from the waste are heated so that they melt and/or volatilize and can be recovered in metallic or oxide form from process vapors or from a molten bath. The high temperature metals recovery process typically consists of a mixing unit, a high temperature processing unit, a product collection system, and a residual treatment system. Other volatile metals, such as arsenic or antimony, may be difficult to separate from the desired metal products and may adversely affect the ability to reuse the recovered materials. Slag, the primary residual from the process, is sometimes cooled in a quench tank and reused either directly or after further processing, or, if the material has no recoverable value, it is land disposed after necessary treatment.

Retorting is similar to high-temperature metals recovery in that it provides for recovery of metals from wastes primarily by volatilization and subsequent collection and condensation of the volatilized components. It is used primarily to remove elemental mercury, as well as mercury present in the oxide, hydroxide, and sulfide forms from hazardous wastes.

Secondary smelting also is very similar to high-temperature metals recovery; but is generally used for processes that recover lead from hazardous wastes. In this process, waste passes through a smelting furnace where the lead is concentrated into a bullion and separated from slag in molten form.

Ion exchange is primarily used to treat aqueous hazardous wastes with dissolved metals. These wastes also might contain nonmetallic anions such as halides, sulfates, nitrates, and cyanides, and water soluble ionic organic compounds. In ion exchange metals recovery, hazardous metal ions are removed and replaced by nonhazardous ions.

Acid leaching is used to treat hazardous wastes in solid or slurry form that either contain metal constituents that are soluble in a strong acid solution or can be converted by reaction with a strong acid to a soluble form. The acid leaching process is most effective with wastes that have high levels (over 1,000 parts per million) of metal constituents.[10] Leachate from acid leaching generally requires further processing (e.g., ion exchange) to recover metals from the solution.

[10] *Treatment Technology Background Document*, January 1991, EPA, Office of Solid Waste, page 184. Available at https://www.epa.gov/sites/production/files/2016-01/documents/ttbd.pdf.

ORGANICS RECOVERY

Organics recovery technologies are used to separate liquid organic wastes, primarily spent solvents (both halogenated and nonhalogenated), for full or partial recovery. The most common technologies, described below, are distillation and solvent extraction. Other technologies include waste oil recovery and non-solvents organic recovery.

Distillation is a thermal treatment technology applicable to the treatment of wastes containing organics that are volatile enough to be removed by the application of heat. Constituents that are not volatilized may be reused or incinerated, as appropriate. Distillation is the process of separating volatile materials using evaporation followed by condensation. The liquids to be separated must have different volatilities and the degree of separation of these liquids is limited by the difference in their volatilities. Distillation for recovery can be limited by the presence of either volatile or thermally reactive suspended solids.

Important distillation technologies are:

- **Fractionation.** This technology uses tray columns or packed towers equipped with a reboiler, condenser, and an accumulator. The process is not applicable for liquids with high viscosity at high temperature, liquids with a high concentration of solids, polyurethanes, and inorganics. In general, the process is used where recovery of multiple constituents is desired and the waste contains minimal amounts of suspended solids. This process achieves a high product purity.

- **Steam Stripping.** This process is essentially fractionation with steam as heat source. It is typically applied to wastes with less than 1 percent volatile organics.[11]

- **Batch Distillation.** This technology uses a steam-jacketed vessel, a condenser, and a product receiver. Pressurized steam is usually the source of heat.

- **Thin Film Evaporation.** This technology uses a steam-jacketed cylindrical vessel and condenser, where the material trickles down the inside cylinder walls in thin streams, and a distribution device that spreads the film over the heated surface. It can be used to treat highly concentrated organic wastes that contain low concentrations of suspended solids.

Solvent extraction is used to treat wastes with a broad range of total organic content, such as certain oil refinery wastes. Constituents are removed from the waste by mixing it with a solvent that will preferentially dissolve the constituents of concern. The selection of a solvent depends on its solubility with the organic compounds to be removed and the other constituents in the waste. The waste and solvent must be physically immiscible so that after mixing the two immiscible phases can be physically separated by gravity. The process can be either batch or continuous. The simplest, least effective solvent extraction unit is a single-stage system (mixer-setter system). Other types of solvent extraction systems include multistage contact extraction (basically a series of single-stage units), countercurrent multi-stage extraction columns, and centrifugal contactors.

[11] *Treatment Technology Background Document*, January 1991, EPA, Office of Solid Waste, page 135. Available at https://www.epa.gov/sites/production/files/2016-01/documents/ttbd.pdf.

INORGANICS RECOVERY

Acid regeneration is the primary technology for inorganics recovery and is used to recover mainly halogen and sulfuric acids. These acids are recovered by halogen acid furnaces and sulfur recovery furnaces, respectively. Halogen acid furnaces typically process chlorinated and brominated secondary waste streams, with 20 to 70 percent halogen content by weight, to produce either hydrogen chlorine or hydrogen bromine.[12] Sulfur recovery furnaces are used by sulfuric acid plants to process used sulfuric acid and other sulfur-containing wastes. Typical acid contaminants include organics, inorganics, and water. The contaminated acids and other halogen- or sulfur-containing compounds are thermally decomposed at elevated temperatures and the desired halogen or sulfur compounds captured from the exhaust gases, such as by passing the gases through converted catalyst beds.

ENERGY RECOVERY

Energy recovery systems burn hazardous waste for its fuel value. The capacity to burn liquids as fuel dominates at a national level, as sludges and solids are not often burn for recovery. Types of energy recovery systems are discussed below.

- **Industrial kilns.** Cement and lightweight aggregate kilns can burn liquid hazardous wastes for their heat value. (A few cement kilns also burn small containers of viscous or solid hazardous waste fuels.) Typically, cement kilns blend the wastes with fossil fuels while aggregate kilns burn 100 percent liquid wastes.

- **Industrial boilers.** Some industrial boilers can use limited amounts and types of hazardous wastes as supplements to fossil fuels. The wastes are commonly blended before using as fuel.

FUEL BLENDING

Fuel blending is the process of blending hazardous waste streams together, generally in tanks, to obtain a fuel that meets the specifications of fuel burners (e.g., energy recovery systems). Fuel blending is not a stand-alone treatment technology; the resulting fuels are subsequently burned, either on or offsite, by combustion systems.

INCINERATION

Incineration uses controlled, high-temperature combustion processes to break down the organic compounds in a hazardous waste. The incineration of hazardous waste must be performed in accordance with the incinerator design and emissions regulations in 40 CFR Part 264, Subpart O or 40 CFR Part 265, Subpart O. Incinerators can burn pumpable waste (liquids and gases), nonpumpable waste (solids and sludges), or both. Several types of incinerators are discussed below.

Liquid Injection Incinerators. These incinerators are used widely for destruction of liquid organic wastes. They operate by spraying the waste mixed with air into a chamber where flame oxidation occurs.

[12] 56 *FR* 7140, February 21, 1991. Available at https://archive.epa.gov/epawaste/hazard/web/pdf/56fr7134022119911.pdf.

Rotary Kilns. Rotary kilns can treat most types of solids, liquids, and gases. They consist of a long inclined tube where the waste is placed and rotated slowly as heat is applied. The process is intended for solids, but liquids and gases can be mixed with the solids.

Fluidized-bed Incinerators. Air is blown through a granular bed (usually sand) until the particles are suspended and move and mix like a fluid. The heated particles come in contact with the wastes to be incinerated and improve the heat transfer. This type of incineration is ideal for sludge and slurries.

Other types of incinerators include two-stage and fixed hearth.

The ash produced from the incineration of hazardous waste also may be hazardous, and therefore must be further treated by stabilization before disposed in a landfill.

WASTEWATER TREATMENT

This CAP management category covers a broad range of treatment technologies and treats the largest volume of hazardous waste of any CAP management category. Wastes that are treated in this category either undergo further treatment (under this or other CAP management categories) or are sent for disposal. Many of these technologies are used together in one treatment system (e.g., chrome reduction followed by chemical precipitation). The discussion of these technologies is organized by the principal type of waste treated: aqueous inorganic, aqueous organic, aqueous inorganic and organic sludge, and other.

Aqueous Inorganic Treatment

- **Chrome reduction (hexavalent)** is applicable to wastes containing hexavalent chromium wastes, including plating solutions. The process uses a chemical reaction with a reducing agent, such as sulfur dioxide or sodium bisulfite, to reduce chromium from a hexavalent to a trivalent state, so that the chromium can be more easily precipitated. The reduced chromium compounds are precipitated from the solution by raising the pH and the resulting insoluble form of chromium is allowed to settle from the solution.

- **Cyanide destruction** is applicable to wastes containing high concentrations of cyanide, such as concentrated spent plating solutions. This technology is often applied as pretreatment prior to chemical oxidation. The waste is subject to electronic reaction with dissolved oxygen in an aqueous solution and broken down into carbon dioxide, nitrogen, and ammonia. The procedure is conducted at elevated temperature, depends on the conductivity of waste, and occurs in a closed cell.

- **Chemical oxidation** changes the chemical form of hazardous material through a chemical reaction with an oxidizing agent that produces carbon dioxide, water, salts, and simple organic acids. Principal chemical oxidants include hypochlorite, chlorine gas, chlorine dioxide, hydrogen peroxide, ozone, and potassium permanganate. This technology is used to treat wastes containing organics, sulfide wastes, and certain cyanide and metal wastes.

- **Chemical precipitation** is used to treat wastewaters containing metals and other inorganic substances such as fluoride. The process removes these metals and inorganics from solution in the form of insoluble solid precipitate by adding a precipitating agent (e.g., lime, caustic

(NaOH), sodium sulfide). The solids that form are then separated from the wastewater by settling, clarification, and/or polishing filtration. Pretreatment may be required for some wastewaters, such as those that contain chromium or cyanide.

- **Ion exchange** is used to treat hazardous wastewaters with metals that are present as soluble ionic species; nonmetallic anions such as halides, sulfates, nitrates, and cyanides; and water soluble ionic organic compounds. Typically, the waste constituents are removed when a waste solution is percolated through a granular bed of the ion exchanger in which ions from the waste are exchanged with those in the ion exchanger.

- **Reverse osmosis** involves a dilute solution and concentrated solution separated by a semi-permeable membrane. When high pressure is added to the concentrated side, the solution flows through the membrane to the more dilute side, collecting waste constituents that are unable to pass through the membrane.

Aqueous Organic Treatment

- **Biological treatment processes** are used to decompose hazardous organic substances with microorganisms. These processes require stable operating conditions and usually take place in tanks or lagoons. The most common type is aerobic biological treatment, including activated sludge treatment. This method treats wastewaters with low levels of nonhalogenated organics and certain halogenated organics.

- **Carbon adsorption** is used to treat aqueous organic wastewaters with high molecular weights and boiling points and low solubility and polarity, chlorinated hydrocarbons, and aromatics (e.g., phenol). The wastewater is passed through activated carbon beds which attract and hold (adsorb) the organic waste constituents (and possibly inorganics and metals), removing them from the water.

- **Air stripping** is a process used to treat aqueous organic waste with relatively high volatility and low water solubility. The volatile contaminants are evaporated into the air and captured for subsequent treatment.

- **Steam stripping** is used to treat aqueous organic wastes contaminated with chlorinated hydrocarbons, aromatics, ketones, and/or alcohols. This technology can treat less volatile and more soluble wastes than air stripping, and can handle a wide concentration range. First, steam is used to evaporate volatile organics. The evaporated organics are then captured, condensed, and reused or further treated.

Aqueous Inorganic/Organic Treatment

- **Wet air oxidation** is used to treat aqueous waste streams with less than five percent organics, pesticides wastes, and wastewaters containing sulfur, cyanide, or phenolic compounds. It is not recommended for treating aromatic halogenated organics, inorganics, or large volumes of waste. The aqueous solution is heated in the presence of compressed air and dissolved or finely divided organics are oxidized. These oxidized products usually remain in the liquids phase. These liquids can then be further treated or sent for disposal. An important advantage of wet air oxidation is that it accepts waste with organic concentrations ranging between those considered ideal for biological treatment or for incineration.

Other Wastewaters Treatment

- **Neutralization** is used to treat waste acids and alkalies (bases) in order to eliminate or reduce their reactivity and corrosiveness. In this process, an excess of acidic ions (H+) is balanced with an excess of base ions (OH) to form a neutral solution.

- **Evaporation** is physical separation of a liquid from a dissolved or suspended solid by adding energy to volatilize the liquid. It can be applied to any mixture of liquids and nonvolatile solids. The liquid should volatilize at a reasonable temperature.

- There are many types of **settling/clarification processes**. One type is sedimentation, which is a gravity-settling process that allows heavier solids to separate from fluid by collecting at bottom of a containment vessel such as settling ponds or a circular clarifier. Additional treatment is needed for the liquid and separated sludge.

- **Flocculation** is the addition of a chemical to a waste to enhance sedimentation and centrifugation; primarily for inorganic precipitation.

- **Phase separation** refers to processes such as emulsion breaking and filtration. *Emulsion breaking* uses gravitational force to separate liquids with sufficiently different densities, such as oil and water. This process is enhanced by adding certain acids. *Filtration* is the process of separating and removing suspended solids from a liquid by passing the liquid through a porous medium (see sludge dewatering). Polishing filtration, applied to wastewaters containing relatively low concentrations of acids, is used after chemical precipitation and settling/clarification of wastewaters containing inorganic precipitates to remove additional particles, such as those that are difficult to settle because of their shape or density.

SLUDGE TREATMENT

- **Sludge dewatering (sludge filtration)** is used for wastes with high concentrations of suspended solids (generally higher than 1 percent). Sludges can be dewatered to 20 to 50 percent solids. The solid particles are separated from the waste through a filter that permits fluid flow but retains the particles. For this technology, waste can be pumped through a porous filter, drawn by vacuum through a cloth filter, or gravity-drained and mechanically pressured through two continuous fabric belts.

- **Solvent extraction** is used to treat wastes with a broad range of total organic content such as certain oil refinery waste. Constituents are removed from the waste by mixing it with a solvent that will preferentially dissolve the constituents of concern. The waste and solvent must be physically immiscible so that after mixing the two immiscible phases can be physically separated by gravity.

Other sludge treatment methods include addition of excess lime or caustic to increase the alkalinity of the waste and absorption/adsorption processed to remove liquid from the sludge.

STABILIZATION/CHEMICAL FIXATION

Stabilization and chemical fixation refer to treatment processes that chemically or physically immobilize the hazardous constituents in a waste by binding the hazardous constituents into a solid mass. The resulting product has a low permeability that resists leaching.

Stabilization is used to treat wastes containing leachable metals and having a high filterable solids content, low organic carbon content, and low oil and grease content. The leachable metals in a waste are immobilized following the addition of stabilizing agents and other chemicals, and the resulting lattice structure and/or chemical bonds bind the metals to the solid matrix and thereby limit the amount of metal constituents that can be leached. The process normally requires a weighing device, a mixing unit (typically commercial concrete mixers), and a curing vessel or pad. Advantages of stabilization include inexpensive and plentiful raw materials and minimal pretreatment requirements. The main disadvantage is that the large volumes of additives required greatly increase the waste volume to be disposed. The main stabilization technologies are:

- **Lime-Based Pozzolan Process.** This technology treats sludges and contaminated soils by adding large amounts of siliceous (silica) materials combined with a setting agent such as lime, forming a dewatered stabilized solidified product. Contaminants can include metals, waste oils, and solvents. Materials such as borates, sulfates, and carbohydrates interfere with the process.

- **Portland Cement Pozzolan Process.** This technology is similar to the lime-based pozzolan process except that the waste is mixed with portland cement. The process is effective for metal cations, latex, and solid plastic wastes. Large amounts of dissolved sulfate salts or metallic anions (such as arsenate and borates) can interfere with solidification. Organic material, lignite, silt, or clay in the wastes will increase setting time.

- **Sorption.** This technology, suitable for organics and inorganics, is commonly used to treat metal sludges removed from aqueous waste streams. Contaminants are bound up in pozzolan-type matrices by physical or chemical sorption, yielding a stabilized, easier to handle material. After treatment, the material is permeable and contains a high concentration of contaminants at its surface; consequently, contaminants may leach.

Two types of ***high temperature stabilization*** include vitrification and high temperature calcination. The *vitrification* process involves dissolving the waste at high temperatures into glass or glasslike matrix. It is applicable to nonwastewaters containing arsenic (usually in form of arsenate salts), other characteristic toxic metal constituents that are relatively nonvolatile at operating temperature of the process, and certain wastes containing organometallic compounds. The process is not applicable to volatile metallic compounds or wastes containing high levels of constituents that will interfere with the vitrification process such as chlorides and halogen salts. *High temperature calcination*, applicable to inorganic wastes that do not contain volatile constituents, involves merely heating the material at high temperatures. The waste is sometimes blended with lime before heating. The process removes water from the waste, converts hydroxides to oxides, and converts the waste into a coherent mass, reducing surface area to minimum.

Fixation processes are applicable to liquid, semi-liquid, or solid wastes that may leach hazardous constituents. The processes can effectively treat a variety of hazardous wastes containing heavy metals, such as sludges from electroplating operations, ion-exchange resins from water

demineralization, spent activated carbon, pesticides, nickel-cadmium battery sludge, and pigment production sludge. The process involves grinding a dewatered waste, mixing the resulting particles with a hardening resin, placing the mixture in a mold, and heating the material until it fuses. The product is hard, solid block with reduced leachability potential, improved handling, and minimal volume increase (unlike conventional stabilization techniques). The most serious drawback is uncertainty about long-term effectiveness.

In the main fixation technologies, asphalt-based and thermoplastic encapsulation, the dewatered waste is mixed within either an asphalt bitumen, paraffin, or polyethylene matrix. These technologies are applicable to hazardous wastes that are complex and difficult to treat, but should not be used for waste with high-water content, strongly oxidizing contaminants, anhydrous inorganic salts, tetraborates, iron and aluminum salts, or volatile organics.

Another stabilization/fixation technology is ***polymerization***. This technology has been applied to spills and used catalysts. To convert a monomer or a low-order polymer of a particular compound to a larger polymer. Larger polymers generally have greater chemical, physical, and biological stability. The process is used to treat organics, including aromatics, aliphatics, and oxygenated monomers such as styrene, vinyl chloride, isoprene, and acrylonitrile.

These technologies expand the volume of hazardous wastes to be disposed. The stabilization/fixation of characteristic hazardous waste often generates residuals that are not characteristically hazardous and therefore can be disposed of in Subtitle D landfills.

LAND TREATMENT OR APPLICATION

Wastes disposed by land treatment/farming must meet Land Disposal Restrictions (LDR) treatment standards and land treatment facilities must meet minimum technology standards.[13] This disposal method is only used at onsite and captive facilities; it is not used commercially and the national assessment does not include projections for this CAP management category. Land treatment/farming is used to dispose of biodegradable hazardous wastes by depositing the wastes on or near the soil surface, mixing the wastes with the soil using conventional plow techniques, and allowing the wastes to be naturally decomposed by microbes such as algae and bacteria. The hazardous wastes, including organic liquid wastes and sludges, often require pretreatment before disposal to reduce or eliminate their hazardous attributes. The effectiveness of waste degradation is affected by many factors including the density and makeup of the microbe populations, which vary with soil depth and geographic location, and the care given to the waste after being deposited. The regulatory standards for this technology require the owner or operator to establish a program to ensure that hazardous constituents placed within the facility's treatment zone are degraded, transformed, or mobilized within that zone.[14]

LANDFILL

The landfill category includes landfill and surface impoundment disposal. Waste disposed in a landfill is placed on or beneath the surface of the ground and covered with soil or other material, to isolate the wastes from the environment. Landfills are required to have double liners, leachate-collection systems, and ground-water monitoring programs. Wastes not permitted to be disposed in landfills include bulk or non-containerized liquid nonhazardous and hazardous waste, or free

[13] 40 CFR 264.271.

[14] 40 CFR 264.271.

liquids containing hazardous waste. In addition, wastes such as acids must be segregated to prevent reactions with other wastes or waste constituents.

A surface impoundment is a natural topographic depression; man-made excavation, or diked area, such as a pond, pit, or lagoon that can be used for disposal if the closure requirements for a landfill are followed. Surface impoundments are open on the surface and are designed to accumulate organic and inorganic liquid wastes, sludges, and slurries. Surface impoundments are required to have double liners, leachate collection systems, and routine inspections.[15]

Under the RCRA LDR Program, hazardous wastes generally cannot be disposed in landfills or surface impoundments until after the waste has been properly treated. Thus, disposal facilities receive treatment residuals, such as incinerator ash or stabilized wastes.[16]

DEEPWELL/UNDERGROUND INJECTION

Deepwell/underground injection is the disposal of hazardous wastewaters by injection into underground rock formations. Wastes are injected through bored, drilled, or driven wells, or through dug wells where the depth of the well is greater than its largest surface dimension. The disposal method relies on hydrogeological principles of the movement of liquids in layers of deep underground rock; the most desirable injection zone has sedimentary rocks with sufficient permeability, thickness, depth, and areal extent. Underground injection is most suitable for wastewaters that are low in volume and high in concentration, difficult and costly to treat by surface methods, biologically inactive, noncorrosive, free of suspended solids, and unlikely to react adversely with the rock strata or the fluid used to pressurize the wells. Much of the waste is pretreated to remove suspended solids or adjust the pH. As noted for the landfill CAP management category, hazardous wastes generally cannot be disposed in underground injection wells unless the applicable LDR treatment standards are met.[17] Capacity amounts are determined by permit. Note that many of the wastewater treatment technologies are technically capable of also treating the wastes being disposed through deepwell and underground injection.

TRANSFER/STORAGE

This CAP management category captures those hazardous wastes that are shipped offsite to transfer/storage facilities which store the waste for short periods of time, sometimes bulking the waste with other shipments, and then shipping the waste to hazardous waste management facilities. The hazardous waste must be stored for less than 90 days, or the transfer/storage facility becomes subject to the standards and permitting requirements for hazardous waste management facilities. If the waste is stored more than 10 days (but less than 90 days), the transfer/storage facility is subject to the storage requirements of RCRA Subtitle C. If the waste is stored 10 days or less, the facility is subject only to transporter regulations.[18] Transporters that mix hazardous wastes with different U.S. Department of Transportation (DOT) shipping descriptions in the same container are classified as generators and must comply with the relevant RCRA Subtitle C regulations.

[15] 40 CFR 268.4.
[16] 40 CFR 268.40.
[17] 40 CFR 148.1.
[18] 40 CFR 268.50.

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Appendix D
Methodology for Estimating Demand on Hazardous Waste Capacity

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Methodology for Estimating Demand on Hazardous Waste Capacity

This appendix briefly describes the methodology used by the U.S. Environmental Protection Agency (EPA) to estimate demand on hazardous waste capacity for the 2024 national capacity assessment. To develop the data to assess hazardous waste management demand at a national level, the EPA referred to the *Guidance for Capacity Assurance Planning* document dated May 1993 (also referred to as the 1993 Guidance). This document provides instructions for developing six data tables that provide state-specific information, using the Hazardous Waste Report (also known as the Biennial Report or BR) as the primary source of data.

The instructions in the 1993 Guidance are based on the 1991 BR forms. Since then, the BR forms have changed drastically. For example, the Process System (PS) Form of the BR was the primary source of information on a facility's commercial status and commercial capacity availability, among other data. However, in accordance with the EPA's efforts to reduce the recordkeeping and reporting burden on the regulated community, the EPA streamlined the federal data collection forms for the 1997 BR cycle by eliminating the PS Form. Then, in 2001, there was a significant change to the management method codes used to complete the BR forms because of the Waste Information Needs/Information Needs for Making Environmental Decisions (WIN/INFORMED) Initiative. Thus, the EPA had to make some adjustments to account for the data currently collected from hazardous waste generator and managers using the BR forms.

In addition, due in part to increased knowledge of hazardous waste management, the ability to analyze trends, improvements in data software and hardware capabilities, the EPA was able to develop estimates for cleanup wastes based on BR data instead of the complex calculations used 30 years ago for the CAP program. These technical updates or adjustments to the methodology described in the 1993 Guidance are reflected in the 2024 assessment.

For the 2024 assessment, the year 2021 is the "baseyear" for the demand data because, at the time the analysis was conducted, this was the most recent year for which BR data were available. The EPA used the 2021 BR data to estimate the quantity of hazardous waste management by the following categories:

- **Onsite management.** This includes waste managed in units at the facility generating the waste, which are permitted as not accepting waste from offsite.

- **Captive management.** This includes waste shipped offsite for management at facilities owned by the same company as the generator but located at a different site. The EPA considered all demand for management in units owned by the same company as the generator but located at a different site as captive, including demand reported as onsite management by the captive management facilities. This assignment is reasonable because wastes managed onsite by captive facilities reduce the capacity that is available at the facilities.

- **Commercial management.** This includes wastes shipped by generators to unaffiliated management facilities through private contracts or agreements. The EPA considered all demand for management in units permitted as "accepting waste from offsite" as commercial, including demand reported as onsite management by the commercial management facilities. This assignment is reasonable because wastes managed onsite by commercial facilities

reduce the capacity that is commercially available at the facilities. For example, if a commercial landfill facility disposes of its own onsite wastes at the landfill, the amount of landfill capacity used for that waste will not be available for facilities that send their waste for disposal at the commercial landfill.

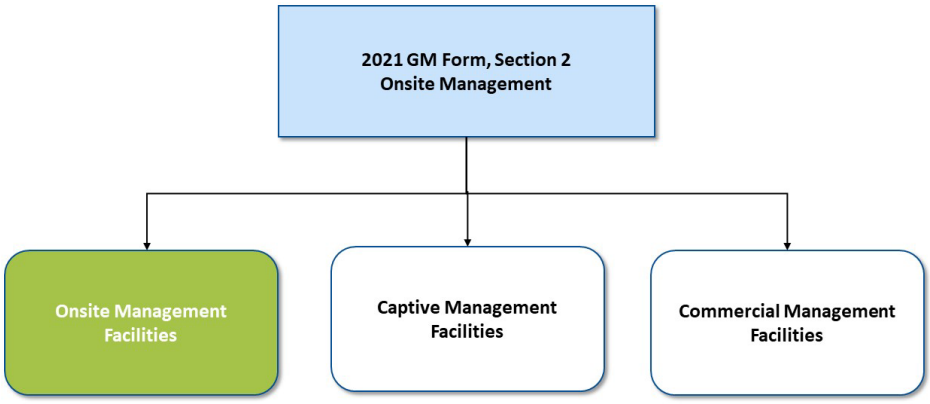
For purposes of the 2024 assessment, these waste quantities represent the amount of "demand" for each of the 12 CAP management categories.

In analyzing the demand for commercial hazardous waste management, an important analytical quality consideration was to evaluate the BR data for any double counting of waste demand. To do this, the EPA first removed foreign import and export waste quantities to avoid the potential of double counting of additional waste demands. Data on foreign imports and exports are incorporated separately in the last step of the assessment. Following this, the EPA identified waste considered to meet the federal regulatory definition of hazardous[19] and separated the RCRA federally-defined hazardous wastes from state regulatory-defined wastes (i.e., wastes from requirements that are more stringent or broader in scope than federal requirements). The EPA also identified wastes reported by generators that do not meet the federal definition of an LQG. These steps were also necessary to avoid double counting of waste demand because waste demand from both wastes not defined hazardous wastes under the RCRA program and waste generated by generators not federally defined as *LQGs* are incorporated in the last steps of the capacity assessment.

The following sections describe the methodologies used to estimate waste demand for onsite management, captive management, and commercial management. The BR Forms and Instructions referenced in the description of the methodologies can be found in at the EPA's RCRAInfo Web (https://rcrapublic.epa.gov/rcrainfoweb/action/main-menu/view).

[19] To be considered a hazardous waste, a material first must be classified as a solid waste (40 CFR 261.2). If a waste is considered solid waste, it must then be determined if it is hazardous waste (40 CFR 262.11). Wastes are defined as hazardous by EPA if they are specifically named on one of four lists of hazardous wastes located in 40 CFR Part 261, Subpart D (F, K, P, U) or if they exhibit one of four characteristics located in 40 CFR Part 261, Subpart C (characteristic wastes).

1. Hazardous Waste Generated and Managed Onsite



Legend

Hazardous Waste Report Form
Onsite Management Capacity

Following are the steps the EPA undertook to estimate the quantities of hazardous waste generated and managed onsite for each of the Capacity Assurance Plan (CAP) management categories:

- ***Step 1: Compile data on hazardous waste generated and managed onsite.*** The EPA referred to Section 2 of GM Forms (Onsite Management) to compile the following data for each waste stream:
  - Reporting year;
  - Include in National Biennial Report flag (refer to text box, for additional information);
  - EPA ID Number of generating facility;
  - Name of generating facility;
  - Page number;
  - Source code;
  - Form code;
  - EPA hazardous waste codes representing the waste;
  - Waste description; and
  - Quantity of hazardous waste generated and managed onsite (in tons).

Include in National Biennial Report (NBR) Flag

The Hazardous Waste Report booklet contains only the requirements for federal RCRA reporting. However, many states require sites to submit a variety of other information with the federally required data.

States may store the federally required data as well as the state-only data in the RCRAInfo system. To be able to differentiate the federally required data from other data, EPA has created flags in RCRAInfo. The flag is referenced as "Include in National Report."

It is the responsibility of each implementer – states and certain EPA regions - to determine which wastes are part of the federally required data. To do this, the implementer must provide either a "Yes" or "No" flag for each GM and WR Form.

- ***Step 2: Separate wastes reported as onsite management at captive management facilities.*** The EPA used available information on the type of hazardous waste management services provided by a facility, and separated quantities of wastes managed by captive hazardous waste management facilities. These wastes were not considered as onsite management but reassigned and included in Table II - 2021 National Baseyear Data Representing Management of Hazardous Waste at Captive Facilities. A list of captive hazardous waste management facilities is included in Appendix B.

- ***Step 3: Separate wastes reported as onsite management at commercial management facilities.*** The EPA used available information on the type of hazardous waste management services provided by a facility, and separated quantities of wastes managed by commercial hazardous waste management facilities. These wastes were not considered as onsite management but reassigned and included in Table III - 2021 National Baseyear Data Representing Management of Hazardous Waste at Commercial Facilities. A list of commercial hazardous waste management facilities is included in Appendix B.

- ***Step 4: Assign "other recovery" and "other treatment" management method codes to CAP management categories.*** For purposes of the capacity assessment, wastes represented by the "other recovery" management method code (Management Method Code H039) were assigned to the "Inorganics Recovery" CAP Management Category.

  In addition, wastes represented by the "other treatment" management method code (Management Method Code H129) were assigned to the "Wastewater Treatment" CAP Management Category, given that about 90 percent of these wastes are wastewaters. The one exception is open burning/open detonation (OB/OD) units. Generally, facilities report OB/OD with Management Method Code H040 (incineration), Management Method Code H041 (OB/OD), or Management Method Code H129 (other treatment). Thus, for consistency purposes, the EPA ensured that all wastes reported by facilities conducting OB/OD activities were represented by the "Incineration" CAP Management Category.

- ***Step 5: Assign waste quantities to appropriate CAP Management Categories.*** The EPA used the BR management method codes and the definitions of the CAP management categories in Attachment 1 at the end of this appendix to assign waste quantities to CAP management categories.

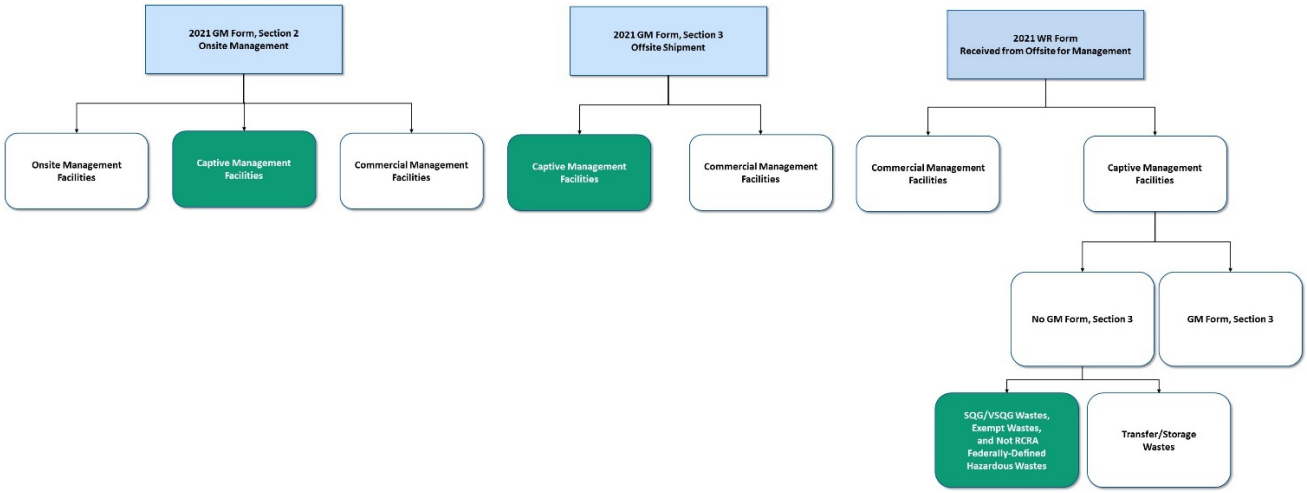
- ***Step 6: Determine total quantities managed onsite for each CAP management category.*** The EPA summed the waste quantities by CAP management category. The total waste quantities by CAP management category are presented in Exhibit D-1. These quantities were rounded up to the nearest hundred and used to create Table I - 2021 National Baseyear Data Representing Hazardous Waste Generated and Managed Onsite in "Section 4 - Discussion of the National Capacity Assessment" of the national assessment report.

Exhibit D-1
Demand on Onsite Management Capacity, 2021 [a, b]

CAP Management Category	Number of Waste Streams	Managed Tons	Rounded Managed Tons
Metals Recovery	29	141,204	141,300
Organics Recovery	298	16,716	16,800
Inorganics Recovery	26	27,959	28,000
Energy Recovery	57	358,805	358,900
Fuel Blending	35	512	600
Incineration	818	268,502	268,600
Wastewater Treatment	968	42,915,965	42,916,000
Sludge Treatment/Stabilization/Encapsulation	26	2,891	2,900
Land treatment or application	5	42	100
Landfill	24	25,690	25,700
Deepwell or Underground Injection	40	20,289,620	20,289,700

[a] Data current as of August 12-13, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of this analysis and report.
[b] Exhibit contains rounding error.

2. Management of Hazardous Waste at Captive Facilities



Legend

Hazardous Waste Report Form
Captive Management Capacity

Acronyms in Exhibit

SQG	Small Quantity Generator
VSQG	Very Small Quantity Generator

Following are the steps the EPA undertook to estimate the quantities of hazardous waste managed at captive facilities for each of the CAP management categories:

GM Form

- ***Step 1: Develop list of captive facilities.*** For each CAP management category, the EPA developed a list of captive facilities. Captive facilities are facilities owned by the same company as the generator but are at a different physical location. Their capacity can only be used by generators under the same ownership or by generators with whom the facility has an agreement to manage their waste. The list of captive facilities (included in Appendix B) was developed based on 2021 BR data and information obtained from RCRAInfo's Permit Module. Wastes sent to facilities that are not included in the list of captive facilities for a particular CAP management category were not included in the analysis of demand on captive management units.

- ***Step 2: Compile data on hazardous waste shipped for management at captive facilities.*** The EPA referred to Section 3 of GM Forms (Offsite Shipment) to compile the following data for each waste stream:

  - Reporting year;
  - Include in National Biennial Report flag (refer to text box, for additional information);
  - EPA ID Number of generating facility;
  - Name of generating facility;
  - Page number;
  - Source code;

- Form code;
- EPA hazardous waste codes representing the waste;
- Waste description;
- Quantity of hazardous waste shipped (in tons);
- EPA ID Number of management facility (i.e., Receiver ID); and
- Name of management facility (i.e., Receiver Name).

Include in National Biennial Report (NBR) Flag

The Hazardous Waste Report booklet contains only the requirements for federal RCRA reporting. However, many states require sites to submit a variety of other information with the federally required data.

States may store the federally required data as well as the state-only data in the RCRAInfo system. To be able to differentiate the federally required data from other data, EPA has created flags in RCRAInfo. The flag is referenced as "Include in National Report."

It is the responsibility of each implementer – states and certain EPA regions - to determine which wastes are part of the federally required data. To do this, the implementer must provide either a "Yes" or "No" flag for each GM and WR Form.

- ***Step 3: Include quantities of wastes generated and managed onsite by captive management facilities.*** The EPA included quantities of wastes managed onsite by captive hazardous waste management facilities.

- ***Step 4: Identify Receiver IDs not in RCRAInfo's Handler Module.*** For purposes of this analysis, the EPA identified Receiver IDs not included in RCRAInfo's Handler Module (i.e., typos in EPA ID Numbers). Information on these identification numbers is provided in Appendix F

- ***Step 5: Assign "other recovery" and "other treatment" management method codes to CAP management categories.*** For purposes of the capacity assessment, wastes represented by the "other recovery" management method code (Management Method Code H039) were assigned to the "Inorganics Recovery" CAP Management Category.

  In addition, wastes represented by the "other treatment" management method code (Management Method Code H129) were assigned to the "Wastewater Treatment" CAP Management Category, given that about 90 percent of these wastes are wastewaters. The one exception is open burning/open detonation (OB/OD) units. Generally, facilities report OB/OD with Management Method Code H040 (incineration), Management Method Code H041 (OB/OD), or Management Method Code H129 (other treatment). Thus, for consistency purposes, The EPA ensured that all wastes reported by facilities conducting OB/OD activities were represented by the "Incineration" CAP Management Category.

WR Form

- ***Step 6: Create list of facilities that completed Section 3 of a GM Form reporting that they shipped their hazardous waste to a captive management facility.*** The EPA created a list of EPA ID Numbers for facilities that, in Section 3 of their GM Forms, reported shipping wastes to captive management facilities.

- ***Step 7: Identify facilities that shipped their wastes directly to captive management facilities.*** In the WR Form data, the EPA compared the EPA ID Number of the shippers to the list of EPA ID Numbers developed under Step 6 (i.e., facilities that shipped their hazardous waste directly to a captive management facility). The EPA then excluded WR Form data for cases in which the EPA ID Number of the shipper is in the list of EPA ID Numbers developed under Step 6. By doing this, the EPA eliminated WR Form data for facilities that shipped their wastes directly to captive management facilities and reported their wastes in Section 3 of a GM Form (i.e., the EPA avoided double-counting of wastes).

- ***Step 8: Assign "other recovery" and "other treatment" management method codes to CAP management categories.*** For purposes of the capacity assessment, wastes represented by the "other recovery" management method code (Management Method Code H039) were assigned to the "Inorganics Recovery" CAP Management Category.

  In addition, wastes represented by the "other treatment" management method code (Management Method Code H129) were assigned to the "Wastewater Treatment" CAP Management Category, given that about 90 percent of these wastes are wastewaters. The one exception is open burning/open detonation (OB/OD) units. Generally, facilities report OB/OD with Management Method Code H040 (incineration), Management Method Code H041 (OB/OD), or Management Method Code H129 (other treatment). Thus, for consistency purposes, the EPA ensured that all wastes reported by facilities conducting OB/OD activities were represented by the "Incineration" CAP Management Category.

GM and WR Form (All)

- ***Step 9: Assign waste quantities to appropriate CAP Management Categories.*** The EPA used the BR management method codes and the definitions of the CAP management categories in Attachment 1 at the end of this appendix to assign waste quantities to CAP management categories.

- ***Step 10: Determine total quantities managed at captive facilities for each CAP management category.*** The EPA summed the waste quantities from Section 3 of GM Forms and WR Forms to calculate the total quantities by CAP management category. The total waste quantities by CAP management category are presented in Exhibit D-2. These quantities were rounded up to the nearest hundred and used to create Table II - 2021 National Baseyear Data Representing Management of Hazardous Waste at Captive Facilities in "Section 4 - Discussion of the National Capacity Assessment" of the national assessment report.

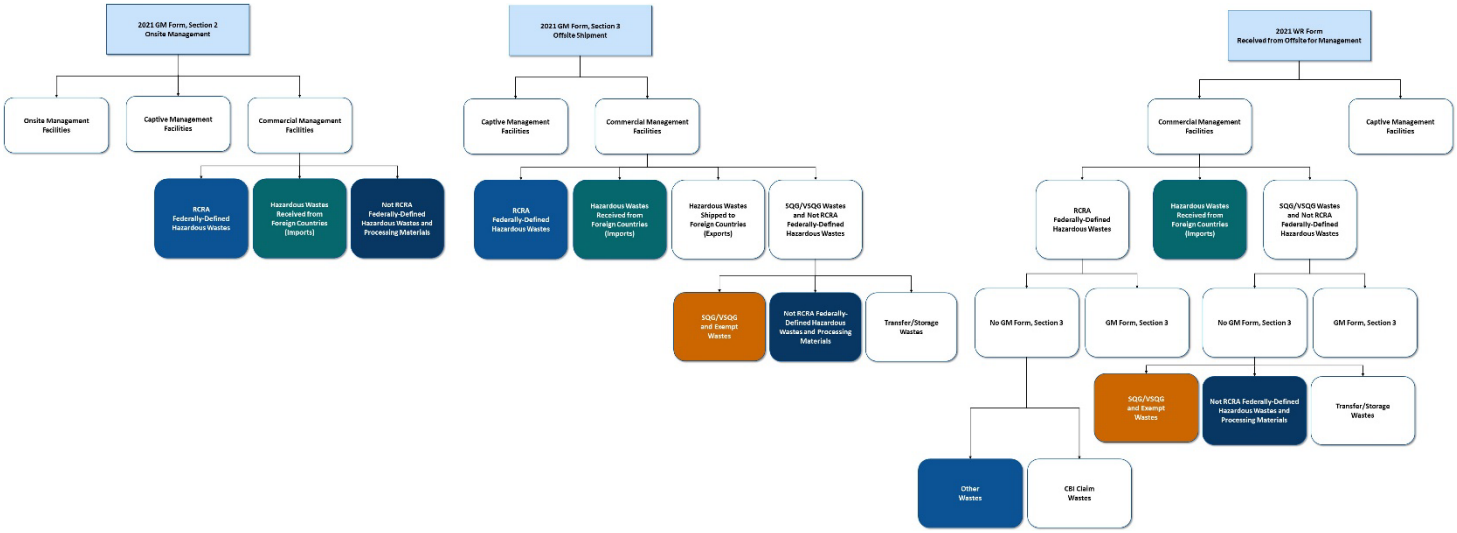
Exhibit D-2
Demand on Captive Management Capacity, 2021 [a, b]

CAP Management Category	Wastes Generated and Managed Onsite (GM Form, Section 2)		Direct Shipments (GM Form, Section 3)		SQG/VSQG Wastes and Not RCRA Federally-Defined Hazardous Wastes (WR Form with No GM Form)		Total		
	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Rounded Managed Tons
Metals Recovery	3	728	19	492	6	2	28	1,222	1,300
Organics Recovery	4	2,235	17	9,367	11	6,264	32	17,866	17,900
Inorganics Recovery	6	6,054	11	6,291	9	73,896	26	86,241	86,300
Energy Recovery	6	92,477	4	17,784			10	110,261	110,300
Fuel Blending	5	2	2	80	13	21	20	104	200
Incineration	635	315,004	1,426	96,722	226	3,013	2,287	414,739	414,800
Wastewater Treatment	129	8,763,892	50	235,574	92	226	271	8,999,692	8,999,700
Sludge Treatment/Stabilization/Encapsulation	35	56	2	12	20	2,417	57	2,485	2,500
Land treatment or application							0	0	0
Landfill	58	13,229	86	6,690	72	2,667	216	22,586	22,600
Deepwell or Underground Injection	6	2,890,963	10	641,008			16	3,531,971	3,532,000
Transfer/Storage			937	986			937	986	1,000

[a] Data current as of August 12-13, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of this analysis and report.

[b] Exhibit contains rounding error.

3. Management of Hazardous Waste at Commercial Facilities



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Hazardous Waste Report Form
Commercial Management Capacity – RCRA Federally-Defined Hazardous Wastes
Commercial Management Capacity – Hazardous Waste Imports
Commercial Management Capacity – SQG/VSQG Wastes
Commercial Management Capacity – Not RCRA Federally-Defined Hazardous Wastes and Processing Materials

Following are the steps the EPA undertook to estimate the quantities of hazardous waste managed at commercial facilities for each of the CAP management categories.

RCRA Federally-Defined Process and Cleanup Wastes

- ***Step 1: Develop list of commercial management facilities.*** For each CAP management category, the EPA developed a list of commercial management facilities. The list of facilities (included in Appendix B) was developed based on information obtained from 2021 BR data and RCRAInfo's Permit Module.

- ***Step 2: Compile data on hazardous waste shipped for management at commercial facilities.*** The EPA referred to Section 3 of GM Forms (Offsite Shipment) to compile the following data for each waste stream:

  - Reporting year;
  - Include in National Biennial Report flag (refer to text box, for additional information);
  - EPA ID Number of generating facility;
  - Name of generating facility;
  - Page number;
  - Source code;
  - Form code;
  - EPA hazardous waste codes representing the waste;

- Waste description;
- Federal waste indicator;
- Quantity of hazardous waste shipped (in tons);
- EPA ID Number of management facility (i.e., Receiver ID); and
- Name of management facility (i.e., Receiver Name).

Include in National Biennial Report (NBR) Flag

The Hazardous Waste Report booklet contains only the requirements for federal RCRA reporting. However, many states require sites to submit a variety of other information with the federally required data.

States may store the federally required data as well as the state-only data in the RCRAInfo system. To be able to differentiate the federally required data from other data, EPA has created flags in RCRAInfo. The flag is referenced as "Include in National Report."

It is the responsibility of each implementer – states and certain EPA regions - to determine which wastes are part of the federally required data. To do this, the implementer must provide either a "Yes" or "No" flag for each GM and WR Form.

- ***Step 3: Include quantities of wastes managed onsite by commercial management facilities.*** The EPA used available information, from GM Form, Section 2 (Onsite Management), on the type of commercial hazardous waste management services provided by a facility and included quantities of wastes managed by commercial hazardous waste management facilities.

- ***Step 4: Separate waste received from foreign countries (imports).*** The EPA used information reported in the GM Form to identify wastes received from foreign countries. To do this, the EPA referred to the BR source code. The EPA identified wastes represented by Source Code G62 (hazardous waste received from a site located outside of U.S. States, territories, or protectorates. This site was the generator of record and is the U.S. Importer). To avoid any potential double counting, the EPA analyzed these wastes separately. Refer to Appendix E for additional information on the data on hazardous wastes received from foreign countries that were used in this assessment.

- ***Step 5: Separate waste shipped to foreign countries (exports).*** The EPA identified wastes shipped to foreign countries by referring to the Receiver ID. The EPA identified wastes shipped to facilities with a Foreign Country (FC) ID Number.

  Unless required by their state, hazardous waste exporters are not required to submit a BR for the hazardous waste that was exported directly out of the U.S. to a site located in a foreign country. Therefore, not all hazardous waste exporters include data on hazardous waste exports in the BR. Given that data on hazardous waste exports in the BR are incomplete, the EPA excluded them from the rest of the analysis.

  To compile national level data on hazardous wastes shipped to foreign countries, the EPA referred to Annual Export Reports submitted to the agency under 40 CFR 262.83(g). Refer to

Appendix E for additional information on the hazardous waste export data used in this assessment.

- ***Step 6: Identify Receiver IDs not in RCRAInfo's Handler Module.*** For purposes of this analysis, the EPA identified Receiver IDs not included in RCRAInfo's Handler Module (i.e., typos in EPA ID Numbers). Information on these identification numbers is provided in Appendix F

- ***Step 7: Assign "other recovery" and "other treatment" management method codes to CAP management categories.*** For purposes of the capacity assessment, wastes represented by the "other recovery" management method code (Management Method Code H039) were assigned to the "Inorganics Recovery" CAP Management Category.

  In addition, wastes represented by the "other treatment" management method code (Management Method Code H129) were assigned to the "Wastewater Treatment" CAP Management Category, given that about 90 percent of these wastes are wastewaters. The one exception is open burning/open detonation (OB/OD) units. Generally, facilities report OB/OD with Management Method Code H040 (incineration), Management Method Code H041 (OB/OD), or Management Method Code H129 (other treatment). Thus, for consistency purposes, the EPA ensured that all wastes reported by facilities conducting OB/OD activities were represented by the "Incineration" CAP Management Category.

  Finally, the EPA identified several facilities that reported Management Method Code H132 (landfill (with prior treatment and/or stabilization)) but do not have a RCRA Subtitle C permitted landfill. These facilities include:

EPA ID Number	Facility Name
AZC950823111	LA PAZ COUNTY-COMMUNITY DEVELOPMENT AGENCY
AZD983481813	BUTTERFIELD STATION LANDFILL
AZR000002428	COPPER MOUNTAIN LANDFILL
AZR000031559	NORTHWEST REGIONAL LANDFILL
AZR000506980	SOUTH YUMA COUNTY LANDFILL COMPOST FACILITY
AZR000520882	LA PAZ COUNTY LANDFILL
CAD981382732	ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY
CAL000190080	FORWARD LANDFILL INC DISPOSAL
NYN008024069	HYLAND LANDFILL
OHD987048212	CARBON LIMESTONE LANDFILL BFI OF OHIO INC
ORD987173457	COLUMBIA RIDGE LDFL & RECYCLING CTR
PAD004835146	MAX ENVIRONMENTAL TECHNOLOGIES INC YUKON FAC [20]

[20] Max Environmental Technologies received approval for the stabilization (Management Method Code H110) and delisting of specific hazardous wastes. The resulting stabilized wastes are disposed as residual wastes. Refer to 40 CFR Part 261, Appendix IX (Wastes Excluded Under §§260.20 and 260.22) for additional information.

Although the above facilities' reporting is consistent with the BR instructions, for purposes of this analysis, a more appropriate management method code would be Management Method Code H110 (Stabilization prior to land disposal at another site). Therefore, the EPA revised the management method code reported by the above facilities to Management Method Code H110.

- ***Step 8: Identify RCRA federally-defined hazardous wastes.*** The EPA used waste stream information to identify RCRA federally-defined hazardous wastes. In this analysis, RCRA federally-defined hazardous wastes are wastes represented by Include in NBR Flag equal to "Y" AND Federal Waste Indicator equal to "Y." Not RCRA federally-defined hazardous wastes were analyzed separately.

- ***Step 9: Categorize wastes based on waste generation activity (i.e., process wastes and cleanup wastes).*** For purposes of this analysis, the EPA categorized waste streams based on the type of process or activity from which the hazardous waste was generated. In particular, the EPA categorized waste streams as "process waste" or "cleanup waste." The approach relies on source codes reported by facilities in their BR.

  Process wastes are those represented by the following Source Code Groups:
  - Wastes from Ongoing Production and Service Processes (i.e., Source Codes G01 through G09)
  - Other Intermittent Events or Processes (i.e., Source Codes G11 through G19)
  - Pollution Control and Waste Management Process Residuals (i.e., Source Codes G21 through G27)
  - Spills and Accidental Releases (i.e., Source Codes G31 through G39)

  Cleanup wastes are those represented by the following Source Code Group:
  - Remediation of Past Contamination (i.e., Source Codes G41 through G49)

- ***Step 10: Assign waste quantities to appropriate CAP Management Categories.*** The EPA used the BR management method codes and the definitions of the CAP management categories in Attachment 1 at the end of this appendix to assign RCRA Federally-defined hazardous process and cleanup waste quantities to CAP management categories.

- ***Step 11: Determine total quantities managed at commercial facilities for each CAP management category.*** The EPA summed the waste quantities to calculate the total quantities of process wastes and cleanup wastes by CAP management category. The total waste quantities of process wastes and cleanup wastes by CAP management category for year 2021 are presented in Exhibits D-3 and D-4, respectively. These quantities were rounded up to the nearest hundred and used to create Table III - 2021 National Baseyear Data Representing Management of Hazardous Waste at Commercial Facilities in "Section 4 - Discussion of the National Capacity Assessment" of the national assessment report.

  Total waste quantities of cleanup wastes by CAP management category for year 2019 are presented in Exhibit D-5. These quantities are used in Step 12.

Exhibit D-3
Demand on Commercial Management Capacity, 2021:
RCRA Federally-Defined Hazardous Wastes – Process Wastes [a, b]

CAP Management Category	Onsite Management (GM Form, Section 2)		Offsite Shipment (GM Form, Section 3)		Total		
	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Rounded Managed Tons
Metals Recovery	51	230,198	3,574	887,530	3,625	1,117,728	1,117,800
Organics Recovery	11	5,526	3,574	163,115	3,585	168,641	168,700
Inorganics Recovery	8	6,970	4,373	92,722	4,381	99,692	99,700
Energy Recovery	17	90,575	7,666	888,923	7,683	979,498	979,500
Fuel Blending	251	22,408	32,590	423,700	32,841	446,108	446,200
Incineration	135	36,513	95,854	466,110	95,989	502,623	502,700
Wastewater Treatment	1,051	2,532,862	9,186	400,289	10,237	2,933,152	2,933,200
Sludge Treatment/Stabilization/Encapsulation	281	89,508	9,116	266,310	9,397	355,818	355,900
Landfill	72	167,393	11,630	606,004	11,702	773,398	773,400
Deepwell or Underground Injection	14	299,673	503	342,977	517	642,649	642,700
Transfer/Storage			106,810	367,839	106,810	367,839	367,900

[a] Data current as of August 12-13, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of this analysis and report.
[b] Exhibit contains rounding error.

Exhibit D-4
Demand on Commercial Management Capacity, 2021:
RCRA Federally-Defined Hazardous Wastes – Cleanup Wastes [a, b]

CAP Management Category	Onsite Management (GM Form, Section 2)		Offsite Shipment (GM Form, Section 3)		Total		
	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Rounded Managed Tons
Metals Recovery			10	130	10	130	200
Organics Recovery			5	14	5	14	100
Inorganics Recovery			117	11,493	117	11,493	11,500
Energy Recovery	1	219	15	4,459	16	4,679	4,700
Fuel Blending			86	460	86	460	500
Incineration			374	20,240	374	20,240	20,300
Wastewater Treatment	2	6,947	129	16,573	131	23,520	23,600
Sludge Treatment/Stabilization/Encapsulation	1	1,703	205	152,622	206	154,325	154,400
Landfill			347	67,093	347	67,093	67,100
Deepwell or Underground Injection			9	9,995	9	9,995	10,000
Transfer/Storage			592	11,332	592	11,332	11,400

[a] Data current as of August 12-13, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of this analysis and report.
[b] Exhibit contains rounding error.

Exhibit D-5
Demand on Commercial Management Capacity, 2019:
RCRA Federally-Defined Hazardous Wastes – Cleanup Wastes [a, b]

CAP Management Category	Onsite Management (GM Form, Section 2)		Offsite Shipment (GM Form, Section 3)		Total		
	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Rounded Managed Tons
Metals Recovery					0	0	0
Organics Recovery			2	0	2	0	100
Inorganics Recovery			4	11	4	11	100
Energy Recovery	1	107			1	107	200
Fuel Blending			6	7	6	7	100
Incineration			53	516	53	516	600
Wastewater Treatment	2	7,893	11	316	13	8,209	8,300
Sludge Treatment/Stabilization/Encapsulation	1	0.24	5	18,763	6	18,763	18,800
Landfill			6	5,381	6	5,381	5,400
Deepwell or Underground Injection			1	227	1	227	300
Transfer/Storage			55	2,494	55	2,494	2,500

[a] Data current as of September 16, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of this analysis and report.
[b] Exhibit contains rounding error.

- ***Step 12: Estimate average quantities for cleanup wastes.*** For cleanup wastes, the EPA took the average of the 2021 and 2019 waste quantities developed under Step 11. This step was taken as a conservative approach in order to account for variations in the generation of these one-time wastes. (Note: For process wastes, the EPA used the waste quantities for 2021.)

  The average of the quantities of cleanup wastes by CAP management category are presented in Exhibit D-6. These quantities were rounded up to the nearest hundred and used to create Table IV - National Baseline and Projected Demand for Commercial Hazardous Waste Management Capacity in "Section 4 - Discussion of the National Capacity Assessment" of the national assessment report.

Exhibit D-6
Demand on Commercial Management Capacity - Baseline:
RCRA Federally-Defined Hazardous Wastes – Cleanup Wastes [a, b]

CAP Management Category	Tons Managed in 2021	Tons Managed in 2019	Average Tons	Rounded Average Tons
Metals Recovery	130	0	65	100
Organics Recovery	14	0	7	100
Inorganics Recovery	11,493	11	5,752	5,800
Energy Recovery	4,679	107	2,393	2,400
Fuel Blending	460	7	233	300
Incineration	20,240	516	10,378	10,400
Wastewater Treatment	23,520	8,209	15,865	15,900
Sludge Treatment/Stabilization/Encapsulation	154,325	18,763	86,544	86,600
Landfill	67,093	5,381	36,237	36,300
Deepwell or Underground Injection	9,995	227	5,111	5,200
Transfer/Storage	11,332	2,494	6,913	7,000

[a] Data current as of August 12-September 16, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of this analysis and report.
[b] Exhibit contains rounding error.

Small Quantity Generator/Very Small Quantity Generator (SQG/VSQG) Wastes and Not RCRA Federally-Defined Hazardous Wastes - GM Form

- ***Step 1: Develop list of commercial management facilities.*** For each CAP management category, the EPA developed a list of commercial management facilities. The list of facilities (included in Appendix B) was developed based on information obtained from 2021 BR data and RCRAInfo's Permit Module.

- ***Step 2: Compile data on hazardous waste shipped for management at commercial facilities.*** The EPA referred to Section 3 of GM Forms (Offsite Shipment) to compile the following data for each waste stream:

  - Reporting year;
  - Include in National Biennial Report flag (refer to text box, for additional information);
  - EPA ID Number of generating facility;
  - Name of generating facility;
  - Page number;
  - Source code;
  - Form code;
  - EPA hazardous waste codes representing the waste;
  - Waste description;
  - Federal waste indicator;
  - Quantity of hazardous waste shipped (in tons);
  - EPA ID Number of management facility (i.e., Receiver ID); and
  - Name of management facility (i.e., Receiver Name).

Include in National Biennial Report (NBR) Flag

The Hazardous Waste Report booklet contains only the requirements for federal RCRA reporting. However, many states require sites to submit a variety of other information with the federally required data.

States may store the federally required data as well as the state-only data in the RCRAInfo system. To be able to differentiate the federally required data from other data, EPA has created flags in RCRAInfo. The flag is referenced as "Include in National Report."

It is the responsibility of each implementer – states and certain EPA regions - to determine which wastes are part of the federally required data. To do this, the implementer must provide either a "Yes" or "No" flag for each GM and WR Form.

- ***Step 3: Separate waste received from foreign countries (imports).*** The EPA used information reported in the GM Form to identify wastes received from foreign countries. To do this, the EPA referred to the BR source code. In particular, the EPA identified wastes represented by Source Code G62 (hazardous waste received from a site located outside of U.S. States, territories, or protectorates. This site was the generator of record and is the U.S. Importer). To avoid any potential double counting, the EPA analyzed these wastes separately. Refer to Appendix E for additional information on the data on hazardous wastes received from foreign countries that were used in this assessment.

- ***Step 4: Separate waste shipped to foreign countries (exports).*** The EPA identified wastes shipped to foreign countries by referring to the Receiver ID. In particular, the EPA identified wastes shipped to facilities with a Foreign Country (FC) ID Number.

  Unless required by their state, hazardous waste exporters are not required to submit a BR for the hazardous waste that was exported directly out of the U.S. to a site located in a foreign

country. Therefore, not all hazardous waste exporters include data on hazardous waste exports in the BR. Given that data on hazardous waste imports in the BR are incomplete, the EPA excluded them from the rest of the analysis.

To compile national level data on hazardous wastes shipped to foreign countries, the EPA referred to Annual Export Reports submitted to the agency under 40 CFR 262.83(g). Refer to Appendix E for additional information on the hazardous waste export data used in this assessment.

- ***Step 5: Identify Receiver IDs not in RCRAInfo's Handler Module.*** For purposes of this analysis, the EPA identified Receiver IDs not included in RCRAInfo's Handler Module (i.e., typos in EPA ID Numbers). Information on these identification numbers is provided in Appendix F

- ***Step 6: Reassign management method codes reported in Section 3 of GM Forms based on information provided by managers in their WR Forms.*** The EPA compared the management method codes reported by generators in Section 3 of GM Forms to management method codes reported by managers in their WR Forms. Because, generally, managers have better information on the ultimate management of the wastes, the EPA gave preference to the management method code reported by waste managers for purposes of the capacity analyses.

- ***Step 7: Assign "other recovery" and "other treatment" management method codes to CAP management categories.*** For purposes of the capacity assessment, wastes represented by the "other recovery" management method code (Management Method Code H039) were assigned to the "Inorganics Recovery" CAP Management Category.

  In addition, wastes represented by the "other treatment" management method code (Management Method Code H129) were assigned to the "Wastewater Treatment" CAP Management Category, given that about 90 percent of these wastes are wastewaters. The one exception is open burning/open detonation (OB/OD) units. Generally, facilities report OB/OD with Management Method Code H040 (incineration), Management Method Code H041 (OB/OD), or Management Method Code H129 (other treatment). Thus, for consistency purposes, the EPA ensured that all wastes reported by facilities conducting OB/OD activities were represented by the "Incineration" CAP Management Category.

  Finally, the EPA identified several facilities that reported Management Method Code H132 (landfill (with prior treatment and/or stabilization)) but do not have a RCRA Subtitle C permitted landfill. These facilities include:

EPA ID Number	Facility Name
AZC950823111	LA PAZ COUNTY-COMMUNITY DEVELOPMENT AGENCY
AZD983481813	BUTTERFIELD STATION LANDFILL
AZR000002428	COPPER MOUNTAIN LANDFILL
AZR000031559	NORTHWEST REGIONAL LANDFILL
AZR000506980	SOUTH YUMA COUNTY LANDFILL COMPOST FACILITY
AZR000520882	LA PAZ COUNTY LANDFILL
CAD981382732	ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY

EPA ID Number	Facility Name
CAL000190080	FORWARD LANDFILL INC DISPOSAL
NYN008024069	HYLAND LANDFILL
OHD987048212	CARBON LIMESTONE LANDFILL BFI OF OHIO INC
ORD987173457	COLUMBIA RIDGE LDFL & RECYCLING CTR
PAD004835146	MAX ENVIRONMENTAL TECHNOLOGIES INC YUKON FAC [21]

Although the above facilities' reporting is consistent with the BR instructions, for purposes of this analysis, a more appropriate management method code would be Management Method Code H110 (Stabilization prior to land disposal at another site). Therefore, the EPA revised the management method code reported by the above facilities to Management Method Code H110. The EPA notes that a new Management Method Code (i.e., H113) has been added to the BR to address this situation.

- ***Step 8: Include quantities of wastes managed onsite by commercial management facilities.*** The EPA used available information, from GM Form, Section 2 (Onsite Management), on the type of commercial hazardous waste management services provided by a facility, and included quantities of wastes managed by commercial hazardous waste management facilities.

- ***Step 9: Identify SQG/VSQG wastes and not RCRA federally-defined hazardous wastes.*** The EPA used waste stream information to identify SQG/VSQG wastes and not RCRA federally-defined hazardous wastes. In this analysis, these wastes are represented by Include in NBR Flag equal to "N" OR Federal Waste Indicator equal to "N."

- ***Step 10: Separate wastes managed by transfer/storage.*** The EPA analyzed the data associated with facilities that did not have an offsite shipment reported in GM Form showing that wastes were shipped directly to a commercial facility. Then, the EPA identified and separated wastes represented by Management Method Code H141.

- ***Step 11: Identify SQG/VSQG wastes.*** The EPA identified wastes with Federal waste indicator equal to "Y." These wastes were considered SQG/VSQG wastes. In addition, the EPA included wastes represented by Source Code G51 (hazardous wastes received by an LQG from VSQGs under the control of the same person).

- ***Step 12: Identify not RCRA federally-defined hazardous wastes.*** Wastes not categorized as SQG/VSQG wastes under Step 11 were considered to be not RCRA federally-defined hazardous wastes.

[21] Max Environmental Technologies received approval for the stabilization (Management Method Code H110) and delisting of specific hazardous wastes. The resulting stabilized wastes are disposed as residual wastes. Refer to 40 CFR Part 261, Appendix IX (Wastes Excluded Under §§260.20 and 260.22) for additional information.

Small Quantity Generator/Very Small Quantity Generator (SQG/VSQG) Wastes and Not RCRA Federally-Defined Hazardous Wastes - WR Form

- ***Step 1: Develop list of commercial management facilities.*** For each CAP management category, the EPA developed a list of commercial management facilities. The list of facilities (included in Appendix B) was developed based on information obtained from 2021 BR data and RCRAInfo's Permit Module.

- ***Step 2: Compile data on hazardous waste received for management at commercial facilities.*** The EPA referred to WR Forms to compile the following data for each waste stream:

  - Reporting year;
  - Include in National Biennial Report flag (refer to text box, for additional information);
  - EPA ID Number of management facility (i.e., Receiver ID);
  - Name of management facility (i.e., Receiver name);
  - Page and subpage number;
  - Form code;
  - EPA hazardous waste codes representing the waste;
  - Waste description;
  - Federal waste indicator;
  - Quantity of hazardous waste received (in tons);
  - EPA ID Number of shipping facility (i.e., Shipper ID); and
  - Name of shipping facility (i.e., Shipper name).

Include in National Biennial Report (NBR) Flag

The Hazardous Waste Report booklet contains only the requirements for federal RCRA reporting. However, many states require sites to submit a variety of other information with the federally required data.

States may store the federally required data as well as the state-only data in the RCRAInfo system. To be able to differentiate the federally required data from other data, EPA has created flags in RCRAInfo. The flag is referenced as "Include in National Report."

It is the responsibility of each implementer – states and certain EPA regions - to determine which wastes are part of the federally required data. To do this, the implementer must provide either a "Yes" or "No" flag for each GM and WR Form.

- ***Step 3: Separate waste received from foreign countries (imports).*** In the WR Form data, the EPA identified wastes received from foreign countries by referring to the Shipper ID. In particular, the EPA identified wastes received from facilities with a FC ID Number. These wastes were analyzed separately. Refer to Appendix E for additional information on the data on hazardous wastes received from foreign countries that were used in this assessment.

- ***Step 4: Assign "other recovery" and "other treatment" management method codes to CAP management categories.*** For purposes of the capacity assessment, wastes represented by the "other recovery" management method code (Management Method Code H039) were assigned to the "Inorganics Recovery" CAP Management Category.

  In addition, wastes represented by the "other treatment" management method code (Management Method Code H129) were assigned to the "Wastewater Treatment" CAP Management Category, given that about 90 percent of these wastes are wastewaters. The one exception is open burning/open detonation (OB/OD) units. Generally, facilities report OB/OD with Management Method Code H040 (incineration), Management Method Code H041 (OB/OD), or Management Method Code H129 (other treatment). Thus, for consistency purposes, the EPA ensured that all wastes reported by facilities conducting OB/OD activities were represented by the "Incineration" CAP Management Category.

  Finally, the EPA identified several facilities that reported Management Method Code H132 (landfill (with prior treatment and/or stabilization)) but do not have a RCRA Subtitle C permitted landfill. These facilities include:

EPA ID Number	Facility Name
AZC950823111	LA PAZ COUNTY-COMMUNITY DEVELOPMENT AGENCY
AZD983481813	BUTTERFIELD STATION LANDFILL
AZR000002428	COPPER MOUNTAIN LANDFILL
AZR000031559	NORTHWEST REGIONAL LANDFILL
AZR000506980	SOUTH YUMA COUNTY LANDFILL COMPOST FACILITY
AZR000520882	LA PAZ COUNTY LANDFILL
CAD981382732	ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY
CAL000190080	FORWARD LANDFILL INC DISPOSAL
NYN008024069	HYLAND LANDFILL
OHD987048212	CARBON LIMESTONE LANDFILL BFI OF OHIO INC
ORD987173457	COLUMBIA RIDGE LDFL & RECYCLING CTR
PAD004835146	MAX ENVIRONMENTAL TECHNOLOGIES INC YUKON FAC [22]

  Although the above facilities' reporting is consistent with the BR instructions, for purposes of this analysis, a more appropriate management method code would be Management Method Code H110 (Stabilization prior to land disposal at another site). Therefore, the EPA revised the management method code reported by the above facilities to Management Method Code H110. The EPA notes that a new Management Method Code (i.e., H113) has been added to the BR to address this situation.

[22] Max Environmental Technologies received approval for the stabilization (Management Method Code H110) and delisting of specific hazardous wastes. The resulting stabilized wastes are disposed as residual wastes. Refer to 40 CFR Part 261, Appendix IX (Wastes Excluded Under §§260.20 and 260.22) for additional information.

- ***Step 5: Identify SQG/VSQG wastes and not RCRA federally-defined hazardous wastes.*** The EPA used waste stream information to identify SQG/VSQG wastes and not RCRA federally-defined hazardous wastes. In this analysis, SQG/VSQG wastes and not RCRA federally-defined hazardous wastes are wastes represented by Include in NBR Flag equal to "N" OR Federal Waste Indicator equal to "N."

- ***Step 6: Create list of facilities that reported that shipped their hazardous waste to a commercial management facility.*** The EPA created a list of EPA ID Numbers for facilities that, in Section 3 of their GM Forms, reported shipping wastes to commercial management facilities.

- ***Step 7: Identify quantities of wastes shipped to commercial management facilities that are only reported by receiving facilities.*** In the WR Form data, the EPA compared the EPA ID Number of the shippers to the list of EPA ID Numbers developed under Step 6 (i.e., facilities that shipped their hazardous waste directly to a commercial management facility). The EPA then identified data for facilities that do not have a GM Form for wastes shipped to commercial facilities. These are the cases in which the EPA ID Number of the shipper in the WR Form is not in the list of EPA ID Numbers developed under Step 6. By doing this, the EPA did not use/eliminated WR Form data for facilities that shipped their wastes directly to commercial management facilities and reported their wastes in a GM Form (i.e., the EPA avoided double-counting of wastes). The remaining wastes reported in WR Forms are wastes shipped by facilities that did not complete Section 3 of a GM Form or by transfer facilities.

- ***Step 8: Separate wastes managed by transfer/storage.*** The EPA analyzed the data associated with facilities that did not have an offsite shipment reported in GM Form showing that wastes were shipped directly to a commercial facility. The EPA then identified and separated wastes represented by Management Method Code H141.

- ***Step 9: Identify SQG/VSQG wastes.*** The EPA identified wastes with Federal waste indicator equal to "Y." These wastes were considered SQG/VSQG wastes.

- ***Step 10: Identify not RCRA federally-defined hazardous wastes.*** Wastes not categorized as SQG/VSQG wastes under Step 9 were considered to be not RCRA federally-defined hazardous wastes.

Exhibit D-7
Demand on Commercial Management Capacity from SQG/VSQG Wastes and Not RCRA Federally-Defined Hazardous Wastes, 2021: GM Form [a]

CAP Management Category	SQG/VSQG Wastes Offsite Shipment (GM Form, Section 3)		Not RCRA Federally-Defined Hazardous Wastes					
			Onsite Management (GM Form, Section 2)		Offsite Shipment (GM Form, Section 3)		Total	
	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons
Metals Recovery	90	606			164	1,271	90	606
Organics Recovery	164	646			49	3,136	164	646
Inorganics Recovery	664	2,771			1,507	215,599	664	2,771
Energy Recovery	120	701			91	2,160	120	701
Fuel Blending	1,220	1,854			313	5,016	1,220	1,854
Incineration	2,167	10,006			2,875	8,422	2,167	10,006
Wastewater Treatment	593	3,917,281			308	4,441	593	3,917,281
Sludge Treatment/Stabilization/Encapsulation	798	950			43	220	798	950
Landfill	859	5,733			2,640	181,333	859	5,733
Deepwell or Underground Injection	9	317					9	317

[a] Data current as of August 12-13, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of the analysis and report.

Exhibit D-8
Demand on Commercial Management Capacity from SQG/VSQG Wastes and Not RCRA Federally-Defined Hazardous Wastes, 2021: WR Form [a]

CAP Management Category	RCRA Federally-Defined Hazardous Wastes		SQG/VSQG Wastes		Not RCRA Federally-Defined Hazardous Wastes	
	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons	Number of Waste Streams	Managed Tons
Metals Recovery	1,909	97,466	47	982	122	999
Organics Recovery	18,143	30,477	1	0	127	457
Inorganics Recovery	12,193	15,843	10	11	19,489	121,315
Energy Recovery	1,795	61,029	3	226		
Fuel Blending	80,419	131,561	23	36	1,473	1,420
Incineration	72,813	40,051	420	452	119	210
Wastewater Treatment	14,805	48,629	803	1,003	316	4,453
Sludge Treatment/Stabilization/Encapsulation	24,198	103,491				
Landfill	14,437	68,790	468	1,584	3,117	189,337
Deepwell or Underground Injection	59	11,710				

[a] Data current as of August 13, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of the analysis and report.

Attachment 1
CAP Management Categories

For purposes of this analysis, the U.S. Environmental Protection Agency (EPA) categorized Biennial Report (BR) management method codes into Capacity Assurance Plan (CAP) management categories based on the similarities in their design, operation, or wastes treated. The CAP management categories are described in the table below and were used in assessing RCRA federally-defined hazardous waste demand. The CAP management categories are consistent with the management categories in the Biennial Report Analytical Methodologies approved by the RCRAInfo Change Management Process (CMP) on April 22, 2013.

CAP Management Category	2021 BR Management Method Code and Description	
RECOVERY		
Metals Recovery	H010	Metals recovery including retorting, smelting, chemical, etc.
	H011	Mercury recovery (include mercury retorting, bulb/lamp crushing and mercury vapor recovery, thermostat recovery, mercury from medical equipment recovery, mercury car switch recovery, etc.)
	H015	Deployment/deactivation of airbag waste followed by metals recovery
Organics Recovery	H020	Solvents recovery (distillation, extraction, etc.)
Inorganics Recovery	H039	Other recovery or reclamation for reuse including acid regeneration, organics recovery, etc. (specify in comments)
Energy Recovery	H050	Energy recovery at this site – used as fuel (includes on-site fuel blending before energy recovery; report only this code)
TREATMENT		
Fuel Blending	H061	Fuel blending prior to energy recovery at another site (waste generated on-site or received from off-site)
Incineration	H040	Incineration – thermal destruction other than use as a fuel (includes any preparation prior to burning)
	H041	Open burning/open detonation

CAP Management Category	2021 BR Management Method Code and Description	
Wastewater Treatment	H070	Chemical treatment (reduction/destruction/oxidation/ precipitation); do not include immediate treatment in an exempt wastewater treatment unit with discharge to a NPDES-POTW (unless required by State)
	H081	Biological treatment; do not include immediate treatment in an exempted wastewater treatment unit with discharge to a NPDES-POTW (unless required by State)
	H090	Polymerization (LDR standard as treatment method)
	H100	Physical treatment only (adsorption/absorption/separation/ stripping/dewatering); do not include immediate treatment in an exempted wastewater treatment unit with discharge to a NPDES-POTW (unless required by State)
	H120	Combination of chemical, biological, and/or physical treatment; do not include immediate treatment in an exempted wastewater treatment unit with discharge to a NPDES-POTW (unless required by State)
	H121	Neutralization only (no other treatment)
	H122	Evaporation (as the major component of treatment; not reportable as H070, H081, H100 or H120)
	H129	Other treatment that does not include onsite disposal (specify in comments)
	H130	Surface Impoundment that will be closed as a landfill (with prior treatment and/or stabilization meeting LDR treatment standard)
	H135	Discharge to sewer/POTW or NPDES with prior management (e.g., storage or transported prior to discharge to POTW or by NPDES)
Sludge Treatment/ Stabilization/Encapsulation	H110	Stabilization prior to land disposal at another site (encapsulation/stabilization/fixation)
DISPOSAL		
Land Treatment or Application	H131	Land treatment or application (with any prior treatment and/or stabilization)
Landfill	H132	Landfill (with prior treatment and/or stabilization)
Deepwell or Underground Injection	H134	Deepwell or underground injection (with or without treatment; this waste was counted as hazardous waste)

CAP Management Category	2021 BR Management Method Code and Description	
TRANSFER/STORAGE		
Transfer/Storage	H141	The site receiving this waste stored/bulked and transferred the waste with no reclamation, recovery, destruction, treatment or disposal at that site. [Do not use this code in Item 1.D (source code G25) or Item 2 (On-site Management) of Form GM]. For Form WR, linked to source code G61 on Form GM.

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Appendix E
Hazardous Wastes Shipped to and Received from Foreign Countries (Hazardous Waste Exports and Imports)

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Hazardous Wastes Shipped to and Received from Foreign Countries (Hazardous Waste Exports and Imports)

The movement of hazardous waste out of and into the United States (U.S.) for recovery or disposal occurs for a number of reasons, including geographic proximity, economies of scale, and international market demand for recovered materials. The U.S. Environmental Protection Agency (EPA) has established and administers an extensive set of regulations, under the Resource Conservation and Recovery Act (RCRA), governing the shipment of hazardous waste within the U.S. In addition to its domestic regulation of hazardous waste, the U.S. participates in a number of bilateral waste agreements between countries and in a multilateral waste agreement controlling the shipment of hazardous waste for recovery between member countries in the Organization for Economic Cooperation and Development (OECD).

1. Hazardous Wastes Shipped to Foreign Countries (Exports)

Exporters of RCRA hazardous waste are subject to specific exporter requirements described in 40 CFR Part 262, Subpart H. Exports of hazardous waste may be handled or managed by several different parties, each having distinct requirements under RCRA. The exporter has specific responsibilities under RCRA. The exporter is defined as "the person under the jurisdiction of the country of export who has or will have at the time the planned transboundary movement commences, possession or other forms of legal control of the wastes and who proposes transboundary movement of the hazardous wastes for the ultimate purpose of submitting them to recovery operations. When the U.S. is the country of export, exporter is interpreted to mean a person domiciled in the U.S." (See 40 CFR 262.81).

Unless required by their state, hazardous waste exporters are not required to submit a Hazardous Waste Report (also known as the Biennial Report or BR) for the hazardous waste that was exported directly out of the U.S. to a site located in a foreign country. Facilities that export hazardous waste must file a separate Annual Report under 40 CFR 262.83(g). (This Annual Report is in addition to the BR, if the state requires the hazardous waste exporter to submit a BR with hazardous waste exported to a site located in a foreign country.)

To compile data on hazardous waste exports, the EPA referred to the Waste Import and Export Tracking System (WIETS) Module in EPA's RCRAInfo system, which holds all information related to hazardous waste exports (e.g., Annual Reports, notices of intent to export hazardous wastes to a specified destination country, acknowledgments of consent, notices of objection). In particular, the EPA queried the WIETS Module for information on hazardous wastes exported in 2022, since annual export data for 2021 are not available.[23] For these wastes, the agency compiled the foreign country name, foreign country site name, waste description, and quantity of waste exported. The EPA then used the waste descriptions and readily available public information on the foreign country sites to assign the wastes to a CAP management category. Finally, the EPA summed the waste quantities by CAP management category.

Exhibit E-1 provides information on hazardous wastes exported from the U.S. in 2022.

[23] Data current as of August 20, 2024.

Exhibit E-1
Examples of Hazardous Wastes Shipped to Foreign Country Sites in 2022

Foreign Country Site Name	Examples of Types of Wastes	CAP Management Category
BELGIUM		
Umicore Battery Recycling	Lithium-ion batteries	Metals Recovery
Umicore Precious Metals Refining	Copper hydroxide sludge	Metals Recovery
CANADA		
Aevitas Inc.	Organic poisons, organic solvents, pentachlorophenol, solids containing non-halogenated organic solvents, waste lubricating oils from internal combustion engines, waste aerosols/flammable	Incineration
C.R.I. Environment Inc.	Aerosols, propane gas cylinders	Inorganics Recovery
	Organic toxic liquids/solids, organic solvents, organic Isocyanates, corrosive liquids, paint related materials	Fuel Blending
Chemrec Inc.	Acetone, alcohols, dichloromethane, flammable liquids, methanol, methyl ethyl ketone, tetrachloroethylene, toluene, trichloroethylene	Organics Recovery
Clean Harbors Canada, Inc.	Blended/bulked non-halogenated/halogenated corrosive liquids, oil emulsions, slurries, waste acidic solutions, alkaline solutions, organic solvents	Incineration
Clean Harbors Canada, Inc.	Debris, filter cake, aerosols, waste catalysts, soils, inorganic solid wastes	Landfill
Cyanide Destruct Systems Inc.	Waste cyanide solutions, waste cyanide liquids/solids, spent stripping solutions where cyanides are used in the process	Wastewater Treatment
Englobe Corporation	Contaminated soils, organic solvents, creosotes, hydrocarbons, aromatic compound, polycyclic organic compounds	Sludge Treatment/Stabilization/Encapsulation
Envirogreen Technologies Ltd.	Clarified slurry oil tank sediment, crude tank sediments, heat exchanger bundle sludge, primary sludge, spent carbon, tar storage residues	Sludge Treatment/Stabilization/Encapsulation
Envirosystems Inc.	Waste paint	Inorganics Recovery

Exhibit E-1
Examples of Hazardous Wastes Shipped to Foreign Country Sites in 2022

Foreign Country Site Name	Examples of Types of Wastes	CAP Management Category
Extox Industries Inc.	Waste tetrachloroethylene, halogenated solvents, residues containing perchloroethylene	Organics Recovery
Fielding Chemical Technologies Inc.	Acetone, adhesives, cyclohexane, ethanol, ethyl acetate, flammable solvents, glycols, ink solvents, isopropanol, methanol, methyl ethyl ketone, methylene chlorine, mineral spirits, paint solvents, perchloroethylene, toluene, trichloroethylene, xylene	Organics Recovery
Glencore Canada Corporation	Ash from wastewater treatment sludge incineration, copper hydroxide sludge, foundry sand	Sludge Treatment/Stabilization/Encapsulation
Horizon Environment Inc.	Contaminated soils, trichloroethylene	Sludge Treatment/Stabilization/Encapsulation
KC Recycling Ltd.	Used electric rechargeable batteries	Metals Recovery
Raw Materials Company Inc.	Alkaline batteries	Metals Recovery
Recuperesol	Soil impacted with hydrocarbons	Sludge Treatment/Stabilization/Encapsulation
Retriev Technologies Ltd.	Lithium ion batteries, wastewater reactive solid, waste reactive solid, waste lithium	Metals Recovery
Revolution Environmental Solutions Acquisition GP Inc.	Halogenated solvents, non-halogenated solvents, lean solvent, waste acidic/basic solutions	Organics Recovery
Revolution VSC Acquisition GP Inc.	Waste batteries	Metals Recovery
Services Sanitaires De Recyclage Expert Inc	Halogenated organic solvents, organics solid/sludge waste contaminated with perchloroethylene from dry cleaners	Organics Recovery
Solumet Metal And Powder Inc.	Hazardous waste solid	Metals Recovery
St. Marys Cement	Wastewater treatment plant sludge	Energy Recovery
Stablex Canada, Inc.	Acids, alkaline liquids and solids, cake sludges, contaminated soil, contaminated sediment, filter cake, green gray mud, incinerator klinker, oxygen canister, plating floor debris	Landfill
Sudbury Integrated Nickel Operations Smelter	GMI baghouse dust	Metals Recovery

Exhibit E-1
Examples of Hazardous Wastes Shipped to Foreign Country Sites in 2022

Foreign Country Site Name	Examples of Types of Wastes	CAP Management Category
Suez Canada Waste Services Inc.	Ignitable materials; poisonous and toxic materials (liquids and solids); water reactive solids and liquids (labpacks)	Incineration
Triumvirate Environmental (Canada) Inc.	Acetone, Adhesives containing a flammable liquid, amines, coating solutions, corrosive/flammable liquids, ethanol, ethyl alcohol, ethyl acetate, flammable aerosols, isopropanol, xylene	Fuel Blending
FRANCE		
Eurecat France SAS	Spent catalyst	Metals Recovery
GERMANY		
Accurec Recycling GMBH	Batteries for recycling	Metals Recovery
Heraeus Deutschland GMBH & CO. KG	Metal residues containing characteristic metals	Metals Recovery
JAPAN		
Nippon Recycle Center Corp. (Nakajima Plant)	NiMH batteries	Metals Recovery
MEXICO		
Corporacion Pipsa SA de CV	Spent lead acid batteries	Metals Recovery
Electrica Automotriz Omega S.A. DE C.V.	Spent lead acid batteries	Metals Recovery
Industrias P. Kay de Mexico	Tin lead	Metals Recovery
Johnson Controls Enterprises Mexico, S. de R.L. de C.V.	Spent lead acid batteries	Metals Recovery
M3 Resources Mexico S.de.R.L.de C. V.	Spent lead acid batteries	Metals Recovery
Oxidos Y Pigmentos Mexicanos, S.A. de C.V.	Spent lead acid batteries	Metals Recovery
Prodyservma, S.A. de C.V.	Spent acid solutions containing inorganic acids, spent caustic solutions containing inorganic bases, waste flammable solvent mixtures	Organics Recovery
Recicladora Industrial de Acumuladores, S.A. de C.V.	Spent lead acid batteries	Metals Recovery
Recicladora Temarry de Mexico, S.A. de C.V.	Waste aqueous solutions, waste flammable liquids, waste mixture of organic and inorganic solvent	Organics Recovery
Technologies Displays Mexicana SA de CV	Cathode ray tubes (CRTs)	Inorganics Recovery

Exhibit E-1
Examples of Hazardous Wastes Shipped to Foreign Country Sites in 2022

Foreign Country Site Name	Examples of Types of Wastes	CAP Management Category
Zinc Nacional, S.A.	Electric arc furnace (EAF) dust	Metals Recovery
NETHERLANDS		
A Jansen BV	Cathode ray tubes (CRTs)	Inorganics Recovery
SOUTH KOREA		
Bytec Co., Ltd.	Spent lead acid batteries	Metals Recovery
Dansukgunsan Industrial Co. Ltd.	Spent lead acid batteries	Metals Recovery
Emax, Inc. Co., Ltd.	Spent lead acid batteries	Metals Recovery
Hongjing Resource Co., Ltd.	Spent catalyst	Metals Recovery
Hwachang Co., Ltd.	Spent lead acid batteries, industrial lead batteries, industrial rails	Metals Recovery
Joong-Il Metals, Inc.	Spent lead acid batteries	Metals Recovery
Kobar Ltd.	NICD batteries, nickel metal hybrid batteries, lithium primary, lithium Ion batteries, primary alkaline	Metals Recovery
Kookjea Metallic Co., Ltd.	Spent lead acid batteries, lead scrap	Metals Recovery
Korea Zinc Co., Ltd Onsan Complex	Spent lead acid batteries	Metals Recovery
Oriental Metal Industry Co., Ltd.	Spent lead acid batteries, lead rails	Metals Recovery
Samji Metal Industrial Co., Ltd.	Spent lead acid batteries	Metals Recovery
Sangshin Metallic Co., Ltd.	Spent lead acid batteries	Metals Recovery
Segi Recycling Technology Co., Ltd.	Spent lead acid batteries	Metals Recovery
Sungeel Hitech Co., Ltd.	Used lithium-ion batteries	Metals Recovery
Young Sin Metal Working Co., Ltd.	Spent refinery catalysts	Metals Recovery
Yun Jin Tech Corp.	Cathode ray tubes (CRTs)	Inorganics Recovery
SPAIN		
Camacho Recycling S.L.	Cathode ray tubes (CRTs)	Inorganics Recovery
Reciclajes Pozo Canada, S.L.	Cathode ray tubes (CRTs)	Inorganics Recovery

Exhibit E-2 summarizes the quantities of hazardous wastes exported from the U.S. in 2022, by CAP management category. These quantities were rounded up to the nearest hundred and used in the development of Table VI - National Capacity Assessment of Projected Remaining Commercial Hazardous Waste Management Capacity through December 31, 2044 in "Section 4 - Discussion of the National Capacity Assessment" of the national assessment report.

Exhibit E-2
Hazardous Wastes Shipped to Foreign Countries in 2022,
by CAP Management Category [a]

CAP Management Category	Tons Shipped to Foreign Countries
RECOVERY	
Metals Recovery	1,130,106
Organics Recovery	36,073
Inorganics Recovery	14,179
Energy Recovery	10,251
TREATMENT	
Fuel Blending	37
Incineration	29,804
Wastewater Treatment	28,627
Sludge Treatment/Stabilization/Encapsulation	9,220
DISPOSAL	
Landfill	162,081
Deepwell or Underground Injection	0
Total	**1,420,379**

[a] Data current as of August 20, 2024.

2. Hazardous Wastes Received from Foreign Countries (Imports)

Under RCRA, any person importing a hazardous waste into the U.S. from a foreign country is responsible for complying with the hazardous waste generator requirements in 40 CFR Part 262, Subparts A – D and the import-specific generator requirements in 40 CFR Part 262, Subpart H. Importers can be any entity that receives hazardous waste from a foreign source, including a Treatment, Storage, or Disposal Facility (TSDF), recovery facility, transporter, or a broker of hazardous waste. While more than one person may be considered an importer, all of the parties, as contributors to the import of hazardous waste, could be held jointly and severally liable for compliance. When multiple parties are involved in the importing process, one party should accept the importer responsibilities on behalf of all the parties. Additionally, hazardous waste generators should check with their state regulatory agency because certain states have additional or more stringent requirements than the Federal Government.

Under existing federal regulations, Large Quantity Generators (LQGs) and TSDFs must include hazardous waste imports in the Hazardous Waste Report (also known as the Biennial Report or BR). Hazardous waste imports must be reported on the Waste Generation and Management

Form (GM Form) or the Waste Received from Off-site Form (WR Form) of the Hazardous Waste Report.

2.1. Hazardous Wastes Imports Reported in GM Forms

A site required to file a Hazardous Waste Report must submit a GM Form for all hazardous waste that was used to determine the site's generator status, including hazardous wastes imported from a site located in a foreign country. In completing the GM Form, the U.S. importer must provide the appropriate source code for the hazardous waste imported from a site located in a foreign country. In the 2021 BR, the source code associated with hazardous waste imports is Source Code G62 (hazardous waste received from a site located outside of U.S. States, territories, or protectorates. This site was the generator of record and is the U.S. Importer.).

The EPA identified wastes received from foreign countries (hazardous waste imports) that were shipped offsite for management by referring to the source codes reported in GM Forms. For these wastes, the agency compiled data on the name of the hazardous waste importer, the quantity of waste imported, and the management method code associated with the waste. The EPA then used the management method codes and the definitions of the CAP management categories to assign waste quantities to CAP management categories. Finally, the EPA summed the waste quantities by hazardous waste importer and CAP management category.

2.2. Hazardous Waste Imports Reported in WR Forms

If a site received hazardous waste directly from a generator located in a foreign country, the site must complete a WR Form for the waste treated, recovered, or disposed at the site. Only the first TSDF receiving foreign hazardous waste should report the waste in a WR Form. If the waste is then shipped to another domestic site, it is not counted as imported waste on the WR Form completed by the second site.

If the generator located in a foreign country has an EPA assigned Identification (ID) Number listed in the "Foreign Site Identification Number List" section of Hazardous Waste Report instructions, the WR Form should be completed using the ID number on the list. If the generator located in a foreign country does not have an ID number on the list, the WR Form should be completed using the code "FC" for foreign country followed by the name of the country in the space for the EPA ID Number.

EPA identified wastes received from foreign countries (hazardous waste imports) reported in WR Forms by referring to the EPA ID Number of the off-site handler from which the waste was received. In particular, the EPA referred to EPA ID Numbers that started with code "FC." In addition, the EPA referred to ID Numbers that have identified as being associated with foreign country sites (e.g., MIR000035204 - Clean Harbors Canada in Corunna, Ontario; NYD980756415 – Stablex Canada in Blainville, Quebec). For these wastes, the agency compiled data on the name of the hazardous waste importer, the quantity of waste imported, and the management method code associated with the waste. The EPA then used the management method codes and the definitions of the CAP management categories to assign waste quantities to CAP management categories. Finally, the EPA summed the waste quantities by hazardous waste importer and CAP management category.

2.3. All Hazardous Wastes Imports

TSDFs acting as the importer of record assume generator requirements for those import shipments. Therefore, in addition to completing a WR Form, these facilities also must report the import shipments as generated hazardous wastes from a foreign source using the GM Form.[24]

To avoid double-counting of hazardous waste imports, the EPA compared the information on hazardous waste imports reported in GM and WR Forms. The agency found that the hazardous waste imports reported in GM Forms were different to the hazardous waste imports reported in WR Forms. As a result, the EPA added the quantities of hazardous waste imports reported in both forms.

Exhibit E-3 shows the quantities of hazardous wastes imported into the U.S. that were reported in GM and WR Forms of the 2021 Hazardous Waste Report. These quantities were rounded up to the nearest hundred and used in the development of Table VI - National Capacity Assessment of Projected Remaining Commercial Hazardous Waste Management Capacity through December 31, 2049 in "Section 4 - Discussion of the National Capacity Assessment" of the national assessment report.

[24] An EPA-acceptable alternative for TSDFs to meet their generator biennial reporting requirement for those import shipments is for the facility to add a statement to the comment field of the WR Form for those import shipments noting that the TSDF was the importer of record for the listed import shipment(s).

Exhibit E-3
Quantity of Hazardous Wastes Received from Foreign Countries Reported in the 2021 Hazardous Waste Report, by CAP Management Category [a]

CAP Management Category	Hazardous Wastes Received from Foreign Countries		
	GM Forms (Tons)	WR Forms (Tons)	Total (Tons)
RECOVERY			
Metals Recovery	19,718	1,352	21,070
Organics Recovery	1,012	1,012	2,024
Inorganics Recovery	0	16,049	16,049
Energy Recovery	1,178	2,139	3,317
TREATMENT			
Fuel Blending	792	5,581	6,373
Incineration	3,594	3,828	7,422
Wastewater Treatment	0	13,660	13,660
Sludge Treatment/Stabilization/Encapsulation	0	638	638
DISPOSAL			
Landfill	0	32,126	32,126
Deepwell or Underground Injection	231	1,025	1,256
TRANSFER/STORAGE			
Transfer/Storage	566	4,372	4,938
Total	**27,090**	**81,783**	**108,873**

[a] Data current as of August 12-13, 2024.

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Appendix F
2021 Biennial Hazardous Waste Report Data Considerations

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2021 Biennial Hazardous Waste Report Data Considerations

The Hazardous Waste Report (also known as the Biennial Report or the BR) is one of the key data sources used in the U.S. Environmental Protection Agency's (EPA's) assessment of national commercial capacity for the recovery, treatment, and disposal of hazardous wastes. For this assessment, the EPA used data reported by facilities in their 2021 BR, the most recent year for which BR data were available.

This appendix describes 2021 BR potential data issues that the EPA considered and examined as part of conducting the national capacity assessment in order to be able to develop an assessment that provides reliable and meaningful results.

1. Data Considerations

In conducting the assessment, the EPA focused enhanced data quality efforts on data elements of the 2021 BR that would have a direct impact on estimates of hazardous waste demand on commercial management capacity. These data elements include:

- EPA Identification Number (EPA ID) of the facilities to which the wastes were shipped (i.e., the Receiver IDs) in Section 3 of Waste Generation and Management (GM) Forms.
- EPA IDs of the facilities from which wastes were received (i.e., Shipper IDs) in Waste Received from Offsite (WR) Forms.
- Management method codes representing the wastes.
- Discrepancies between wastes shipped and wastes received.

1.1. Receiver IDs in Section 3 of GM Forms

In aggregating national baseyear data for captive and commercial management, the EPA relies on offsite shipment data reported in Section 3 of GM Forms. In particular, the EPA relies on the Receiver IDs to determine if the receiving facility is a captive or a commercial facility. The EPA also compares the Receiver IDs in Section 3 of GM Forms to the EPA IDs of waste receiving facilities that filed a WR Form to estimate demand from Small Quantity Generators/Very Small Quantity Generators (SQGs/VSQGs). Therefore, accuracy of the Receiver IDs in Section 3 of GM Forms is key in conducting the national capacity assessment.

Based on review of the data, the EPA determined that a total of 1,010 unique Receiver IDs were reported in 2021 GM Forms. Exhibit F-1 shows information on Receiver IDs reported in 2021 GM Forms.

Exhibit F-1
Unique Receiver IDs in 2021 GM Forms [a]

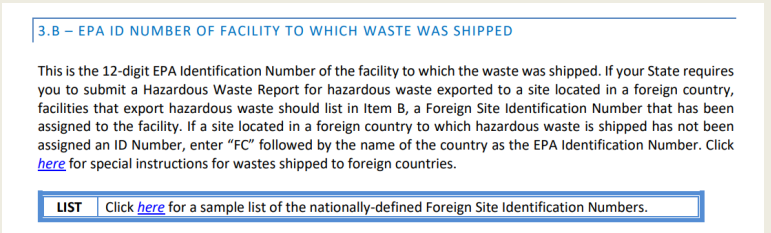
Category		Number of Unique Receiver IDs	Shipped Tons
Receiver IDs in RCRAInfo's Handler Module		835	12,668,976
Receiver IDs Not in RCRAInfo's Handler Module	Foreign Country ID [b]	55	228,927
	Typographical Error	61	3,070
	Unidentifiable	59	7,478
	Subtotal	*175*	*239,475*
Total		**1,010**	**12,908,450**

[a] Data current as of August 13, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of the analysis and report.
[b] Receiver IDs that begin with the code "FC" for foreign country ID or Receiver IDs that have been identified as being associated with a foreign country site.

As shown in Exhibit F-1, of the 1,010 unique Receiver IDs reported in 2021 GM Forms, 175 Receiver IDs are not included in RCRAInfo's Handler Module. Many of the Receiver IDs not in RCRAInfo's Handler Module are EPA IDs with typographical errors very close to IDs of commercial management facilities (usually the difference was only one digit and waste volumes are small). These EPA IDs are presented in Attachment 1 to this appendix, and the EPA used the Commercial Receiver ID (in Attachment 1) when conducting the national capacity assessment.

Foreign Country IDs are not in RCRAInfo's Handler Module. As a result, the BR instructions direct the reporting facility to use "FC" followed by the name of the country as the EPA ID. The inclusion of hazardous waste that was exported directly out of the U.S. to a site located in a foreign country in the BR is a state requirement. At the federal level, hazardous waste exports are accounted for by using Annual Export Reports submitted to the agency under 40 CFR 262.83(g).

Excerpt from RCRA Subtitle C Reporting Instructions and Forms – Section 3 of 2021 GM Form



3.B – EPA ID NUMBER OF FACILITY TO WHICH WASTE WAS SHIPPED

This is the 12-digit EPA Identification Number of the facility to which the waste was shipped. If your State requires you to submit a Hazardous Waste Report for hazardous waste exported to a site located in a foreign country, facilities that export hazardous waste should list in Item B, a Foreign Site Identification Number that has been assigned to the facility. If a site located in a foreign country to which hazardous waste is shipped has not been assigned an ID Number, enter "FC" followed by the name of the country as the EPA Identification Number. Click here for special instructions for wastes shipped to foreign countries.

LIST | Click here for a sample list of the nationally-defined Foreign Site Identification Numbers.

1.2. Shipper IDs in WR Forms

To estimate demand for commercial management capacity from SQGs/VSQGs, the EPA compares the EPA IDs of facilities that reported shipping wastes offsite for management in GM Forms to the EPA IDs of the facilities from which wastes were received in WR Forms (i.e., Shipper IDs). In addition, the EPA uses the Shipper IDs in WR Forms to identify hazardous wastes received from foreign countries (imports). Therefore, accuracy of the Shipper IDs in WR Forms is important for the national capacity assessment.

Based on review of the data, the EPA determined total of 170,355 unique Shipper IDs were reported in 2021 WR Forms. Exhibit F-2 presents information on Shipper IDs reported in 2021 WR Forms.

Exhibit F-2
Unique Shipper IDs in 2021 WR Forms [a]

Category		Number of Unique Shipper IDs	Managed Tons
Shipper IDs in RCRAInfo's Handler Module		148,259	6,425,363
Shipper IDs Not in RCRAInfo's Handler Module	Confidential Business Information (CBI) Claim	41	213,462
	Foreign Country ID [b]	165	81,783
	VSQG Aggregate ID	14,398	33,313
	State assigned ID/Unidentifiable	7,492	44,393
	Subtotal	*22,096*	*372,950*
	Total	**170,355**	**6,798,313**

[a] Data current as of August 13, 2024. Based on new information, implementers (i.e., states and the EPA regions) may revise BR data in RCRAInfo. Thus, some of the data might have changed since the development of the analysis and report.
[b] Shipper IDs that begin with the code "FC" for foreign country ID.

As shown in Exhibit F-2, of the 170,355 unique Shipper IDs reported in 2021 WR Forms, 22,096 Shipper IDs are not included in RCRAInfo's Handler Module. Many of these Shipper IDs are state assigned IDs; most of which were temporary IDs or are currently inactive. Examples of state assigned IDs include:

- IDs issued by **California** to waste generators that have registered with or notified the Department of Toxic Substances Control of their hazardous waste activities.[25]
- SQGs who accumulate no more than 55 gallons of hazardous waste may use **Maine**'s generic generator number, MEX020000000.[26]
- IDs issued by **Minnesota** to hazardous waste generators. In Minnesota, all hazardous waste generators, including Minimal Quantity Generators (MiniQGs), VSQGs, SQGs, and LQGs, must obtain an ID.[27]

[25] State of California, Department of Toxic Substances Control, Hazardous Waste Tracking System. Available at https://hwts.dtsc.ca.gov/.
[26] State of Maine, Department of Environmental Protection, *Handbook for Hazardous Waste Generators*, June 2018. Available at https://www.maine.gov/dep/waste/hazardouswaste/documents/hazardous-waste-handbook-2018.pdf.
[27] Refer to https://www.pca.state.mn.us/sites/default/files/w-hw1-03.pdf. The State of Minnesota has developed an online application ("What's in My Neighborhood" at https://www.pca.state.mn.us/data/whats-my-neighborhood) that contains a searchable inventory of businesses that have applied for and received different types of environmental permits and registrations from the Minnesota Pollution Control Agency.

- IDs for **New York** facilities beginning with "NYP" are provisional ID numbers and should only be used for 30 days after the number is issued. EPA ID numbers for New York facilities beginning with "NYP" or "NYN" should not be used as the permanent EPA ID.[28]

In addition, there is a significant number of VSQG aggregate IDs. The EPA notes, however, that the use of VSQG aggregate IDs is consistent with the BR instructions given that these facilities generally do not have EPA IDs.[29]

Finally, the EPA notes that the agency identified 41 unique Shipper IDs that are masked EPA IDs because the receiving facility asserted a confidential business information (CBI) claim in accordance with 40 CFR part 2, subpart B.

Excerpt from RCRA Subtitle C Reporting Instructions and Forms – WR Form

WASTES RECEIVED FROM VERY SMALL QUANTITY GENERATORS (VSQGs) – Waste management facilities sometimes receive hazardous waste from large numbers of VSQGs or other sites that do not have RCRA EPA Identification Numbers. To minimize the response burden for filling out the **WR Form** for these wastes, you may aggregate the wastes across generating sites, in accordance with these guidelines:

(1) All the wastes must have the same EPA hazardous waste code (Item B), State hazardous waste code (Item C), Form code (Item G), and Management Method code (Item H).

(2) Wastes received from different States must be reported separately. For the off-site handler EPA Identification Number (Item D), the entry should include the two-letter postal code of the originating State, followed by the letters "VSQG".

For example, wastes received from several VSQGs in the State of Alaska (AK) that share a common EPA hazardous waste code, State hazardous waste code, Form code, and Management Method code could be aggregated in a single waste block of the WR Form (e.g., Waste 1). In Item D, the off-site handler EPA ID number is entered as "AKVSQG." **Note:** This method of completing Item D can also be used for VSQG waste that is not aggregated.

1.3. Management Method Codes Representing the Wastes

To ensure readiness for the capacity analyses, the EPA, in collaboration with the states and the EPA regions, conducted QA activities on the management method codes reported in Section 3 of 2021 GM Forms. The accuracy of the reported management methods codes is important to the national capacity assessment because the EPA relies on the management method codes to assign waste quantities to the CAP management categories.

As part of the QA activities associated with the submission of 2021 BR data, the EPA reviewed data for wastes reported in Section 3 of 2021 GM Forms that were represented by Management Method Codes H050 (energy recovery), H040 (incineration), and H132 (landfill). Based on this review, the EPA identified GM Forms for which the management method code was not consistent with the RCRA permitted units at the receiving facility. For example, cases in which wastes were represented by Management Method Code H050 but the receiving facility did not have a RCRA permitted energy recovery unit. The EPA provided these data to the states and the EPA regions, and worked with them to understand the reasons for the questionable data items (e.g., generator/shipper reported the ultimate management method rather than the management method at the initial receiving facility).

1.4. Discrepancies between Wastes Shipped and Wastes Received

As part of the QA activities associated with the submission of 2021 BR data, the agency compared waste quantities reported in Section 3 of 2021 GM Forms to waste quantities reported in 2021 WR Forms. The purpose of this activity was to identify discrepancies between wastes shipped

[28] Refer to https://www.dec.ny.gov/chemical/112876.html.

[29] Under federal regulations, VSQGs do not need to obtain EPA IDs because they are exempt from the notification requirements in RCRA Section 3010 (40 CFR 262.14). However, authorized states may have more stringent requirements for obtaining an ID number than the federal program.

and wastes received. This is an important QA activity for the national capacity assessment because the methodology used to estimate demand on commercial management relies heavily on shipped waste data reported in Section 3 of GM Forms. Therefore, if possible, it is necessary to resolve any potential discrepancies between waste quantities reported by shippers in GM Forms and waste quantities reported by receivers in the corresponding WR Forms.

The EPA identified waste quantity discrepancies between: (1) shipped wastes reported in Section 3 of 2021 GM Forms and received wastes reported in 2021 WR Forms and (2) received wastes reported in 2021 WR Forms and shipped wastes reported in Section 3 of 2021 GM Forms. The EPA then provided these data to the states and the EPA regions, and worked with them to understand the reasons for these discrepancies.

2. Quality Assurance Activities Specific to the Capacity Assessment Effort

To facilitate QA activities specific to capacity assurance planning, the EPA created eight reports in RCRAInfo Production. The purpose of these reports is to help states and the EPA regions check the BR data submitted by facilities. These reports are described in Exhibit F-3.

Exhibit F-3
RCRAInfo Production Reports Developed to Facilitate CAP Data QA Activities

Report Name	Description
Hazardous Waste Generated and Managed On-Site	This report shows the quantity (in tons) of hazardous waste generated and managed on-site for the user-selected criteria. This report presents data to be used in the development of Table I (National Baseyear Data Representing Hazardous Waste Generated and Managed Onsite) of the national capacity assessment.
Hazardous Waste Managed at Captive Facilities	This report shows the quantity (in tons) of hazardous waste generated and managed by a captive management site for the location and biennial report cycle selected. This report presents data to be used in the development of Table II (National Baseyear Data Representing Management of Hazardous Waste at Captive Facilities) of the national capacity assessment.
Hazardous Waste Managed at Commercial Facilities	This report shows the quantity (in tons) of hazardous waste generated and managed by a commercial facility. Waste generated with a source code of G01-G09, G11-G19, G21-G27, or G31-G39 is classified as process waste. Waste generated with a source code of G41-G49 is classified as a cleanup waste. This report presents data to be used in the development of Table III (National Baseyear Data Representing Management of Hazardous Waste at Commercial Facilities) of the national capacity assessment.

Exhibit F-3
RCRAInfo Production Reports Developed to Facilitate CAP Data QA Activities

Report Name	Description
Hazardous Waste Managed at Commercial Facilities	This report shows hazardous waste shipped to a commercial facility for management. This report may be used to conduct QA of waste quantities received at commercial management facilities.
List of Shippers of HW to Commercial Facilities	This report lists handlers that shipped waste to commercial facilities for management in the management category specified. Note: The location provided indicates the location of the shipping facility, not the location of the receiving facility. This report may be used to conduct QA of waste quantities received at commercial management facilities.
Waste Received by Management Method Report	This report shows the quantity of hazardous waste received by management method for the location and biennial report cycle specified. This report may be used to conduct QA of waste quantities received at captive and commercial management facilities.
Waste Received by TSD Facility Report	This report shows the quantity of hazardous waste received by TSD facility for the location and biennial report cycle specified. This report may be used to conduct QA of waste quantities received at captive and commercial management facilities.
Waste Shipped Off-site by Management Method Report	This report shows the quantity of hazardous waste shipped off-site for management by the designated management method as reported on the GM Form for the location and report cycle specified. The data are organized by the facility to which waste was shipped for management (i.e., the receiving facility). This report may be used to conduct QA of waste quantities received at captive and commercial management facilities.

Attachment 1
Receiver IDs Not in RCRAInfo's Handler Module

In conducting the national capacity assessment, the U.S. Environmental Protection Agency (EPA) identified 61 unique EPA Identification Numbers (EPA IDs) reported in Section 3 (Offsite Shipment of Hazardous Waste) of the Generation and Management (GM) Forms of the 2021 Hazardous Waste Report (Receiver IDs) that are not in RCRAInfo's Handler Module but are very similar to a commercial management facility RCRA ID.

Reported Receiver ID	Commercial Receiver ID	Commercial Receiver Name
AL983177015	ALD983177015	US ECOLOGY SULLIGENT, INC.
ARAGONITE	UTD981552177	CLEAN HARBORS ARAGONITE, LLC
ARD060748192	ARD069748192	CLEAN HARBORS EL DORADO, LLC
ARD069648192	ARD069748192	CLEAN HARBORS EL DORADO, LLC
ARD98057870	ARD981057870	RINECO CHEMICAL INDUSTRIES, LLC
ARD981057780	ARD981057870	RINECO CHEMICAL INDUSTRIES, LLC
ARD981067870	ARD981057870	RINECO CHEMICAL INDUSTRIES, LLC
ARD981105870	ARD981057870	RINECO CHEMICAL INDUSTRIES, LLC
ARD98151227	ARD981512270	ASH GROVE CEMENT COMPANY
ARK069748192	ARD069748192	CLEAN HARBORS EL DORADO, LLC
AZ0950823111	AZC950823111	LA PAZ COUNTY-COMMUNITY DEVELOPMENT AGENCY
AZD98073550	AZD980735500	WORLD RESOURCES COMPANY
AZR000621145	AZR000521146	YUMA YES 2 WASTE TRANSFER STATION
IL064418353	ILD064418353	BEAVER OIL CO INC
IND000846943	IND000646943	TRADEBE TREATMENT & RECYCLING LLC
IND09321901	IND093219012	HERITAGE ENVIRONMENTAL SERVICES LLC
IND093219101	IND093219012	HERITAGE ENVIRONMENTAL SERVICES LLC
KSD098063325	KSD980633259	SYSTECH ENVIRONMENTAL CORPORATION
KSD900633259	KSD980633259	SYSTECH ENVIRONMENTAL CORPORATION
KSD908633259	KSD980633259	SYSTECH ENVIRONMENTAL CORPORATION
KSD980633250	KSD980633259	SYSTECH ENVIRONMENTAL CORPORATION
KYD980573196	KYD985073196	AES ENVIRONMENTAL, LLC
LAD00077201	LAD000777201	CHEMICAL WASTE MANAGEMENT INC
LAD000816123	LAD008161234	ECO SERVICES OPERATIONS, CORP
LAD010396127	LAD010395127	CLEAN HARBORS BATON ROUGE LLC
LAD08161234	LAD008161234	ECO SERVICES OPERATIONS, CORP
MOD095038995	MOD095038998	BED ROCK INC DBA TRI STATE MOTOR TRANSIT CO
OHD004271031	OHD004274031	VALICOR ENVIRONMENTAL SERVICES LLC
OHD093945193	OHD093945293	VEOLIA ES TECHNICAL SOLUTIONS LLC
OHD980610641	OHD980613541	HERITAGE THERMAL SERVICES INC
OHD98061351	OHD980613541	HERITAGE THERMAL SERVICES INC
OKD006543837	OKD065438376	CLEAN HARBORS LONE MOUNTAIN LLC
OKD065438378	OKD065438376	CLEAN HARBORS LONE MOUNTAIN LLC
OKD06543876	OKD065438376	CLEAN HARBORS LONE MOUNTAIN LLC
OKD06548376	OKD065438376	CLEAN HARBORS LONE MOUNTAIN LLC
ORH000161299	OHR000161299	AGMET LLC
PAD00073942	PAD000736942	CALGON CARBON CORP
RID0400	RID040098352	NORTHLAND ENVIRONMENTAL LLC
SCD00336891	SCD003368891	HOLCIM US INC GEOCYCLE LLC
TN000772186	TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC

Reported Receiver ID	Commercial Receiver ID	Commercial Receiver Name
TND000077218	TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC
TND0007*2186	TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC
TND000772166	TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC
TND000772178	TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC
TND000772189	TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC
TND00772186	TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC
TND111772186	TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC
TNR000077218	TND000772186	TRADEBE TREATMENT & RECYCLING OF TN, LLC
TX069452340	TXD069452340	US ECOLOGY TEXAS
TX9822900140	TXD982290140	CLEAN HARBORS LAPORTE
TXD000898896	TXD000838896	VEOLIA ES TECHNICAL SOLUTIONS
TXD010971184	TXD010791184	LONESTAR ECOLOGY
TXD015514138	TXD055141378	CLEAN HARBORS DEER PARK
TXD91514383	TXD981514383	ALPHA OMEGA RECYCLING FACILITY
TXD982290410	TXD982290140	CLEAN HARBORS LAPORTE
TXDOOO838896	TXD000838896	VEOLIA ES TECHNICAL SOLUTIONS
TXR000719518	TXD000719518	TM DEER PARK SERVICES
UTD991	UTD991301748	CLEAN HARBORS GRASSY MOUNTAIN
UTD991201748	UTD991301748	CLEAN HARBORS GRASSY MOUNTAIN
UTD991301784	UTD991301748	CLEAN HARBORS GRASSY MOUNTAIN
WAD020257946	WAD020257945	BURLINGTON ENVIRONMENTAL LLC TACOMA

Appendix G
Shipment of Hazardous Wastes Likely to Contain PFAS to Commercial TSDFs

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Shipment of Hazardous Wastes Likely to Contain PFAS to Commercial TSDFs

Per- and polyfluoroalkyl substances (PFAS) are widely used chemicals whose components break down very slowly over time. Scientific studies have shown that exposure to PFAS in the environment may be linked to harmful health effects.

Every year, hazardous wastes containing PFAS are managed at commercial treatment, storage, and disposal facilities (TSDFs). Based on data from EPA's PFAS Analytic Tools, it is estimated that, in 2021, 4,814,185 kilograms (kg) or 5,307 tons of hazardous wastes likely to contain PFAS were shipped (transferred) for management at commercial TSDFs. Exhibit G-1 shows the quantities (kg) of hazardous wastes likely to contain PFAS shipped to commercial TSDFs in 2021, by CAP Management Category. Exhibit G-2 shows the quantities (kg) of hazardous wastes likely to contain PFAS shipped to commercial TSDFs in 2021, by CAP Management Category and receiving facility.

Exhibit G-1
Quantities (kg) of Hazardous Wastes Likely to Contain PFAS Shipped to Commercial TSDFs in 2021, by CAP Management Category [a]

CAP Management Category	Kilograms (kg) of Waste
RECOVERY	
Metals Recovery	0
Organics Recovery	282,590
Inorganics Recovery	958,626
Energy Recovery	0
TREATMENT	
Fuel Blending	272,828
Incineration	784,917
Wastewater Treatment	51,451
Sludge Treatment/Stabilization/Encapsulation	54,250
DISPOSAL	
Landfill	982,267
Deepwell or Underground Injection	464,555
TRANSFER/STORAGE	
	962,701
Total	**4,814,185**

[a] Data current as of December 10, 2024.

Exhibit G-2
Quantities (kg) of Hazardous Wastes Likely to Contain PFAS Shipped to Commercial TSDFs in 2021, by CAP Management Category and Receiving Facility [a]

Handler ID	Handler Name	RECOVERY		TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Organics Recovery	Inorganics Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Underground Injection	
ALD000622464	CHEMICAL WASTE MANAGEMENT, INC.							24,572		2,099
ALD094476793	ALLWORTH, LLC			264						1,707
ALD981020894	CLEAN EARTH OF ALABAMA, INC.									7,153
ALD983177015	US ECOLOGY SULLIGENT, INC.									14
ARD069748192	CLEAN HARBORS EL DORADO LLC				147,703					
AZD081705402	HERITAGE ENVIRONMENTAL SERVICES LLC									481,131
AZR000506980	SOUTH YUMA COUNTY LANDFILL						10,742			
AZR000515924	YUMA YES WASTE TRANSFER FACILITY									79
AZR000520304	AA SYDCOL LLC									7,130
AZR000521146	YUMA YES 2 WASTE TRANSFER STATION									571
CAD008302903	VEOLIA ES TECHNICAL SOLUTIONS,									316
CAD008364432	RHO CHEM LLC									20
CAD044429835	CLEAN HARBORS WILMINGTON LLC									2,290
CAD059494310	CLEAN HARBORS SAN JOSE LLC									5,946
CAD980884183	GEM RANCHO CORDOVA LLC									6,950
CAD982444481	HAZMAT TSDF INC, FORMER FILTER RECYCLING SERVICES INC									6,501
CAT000646117	CHEMICAL WASTE MANAGEMENT, INC.							10,667		
CAT080013352	WORLD OIL RECYCLING		5,674							
COD980591184	VEOLIA ES TECHNICAL SOLUTIONS,									8,622
FLD980729610	CLEAN HARBORS FLORIDA LLC									21
FLD981932494	US ECOLOGY TAMPA, INC.									7

Exhibit G-2
Quantities (kg) of Hazardous Wastes Likely to Contain PFAS Shipped to Commercial TSDFs in 2021, by CAP Management Category and Receiving Facility [a]

Handler ID	Handler Name	RECOVERY		TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Organics Recovery	Inorganics Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Underground Injection	
GAD000616367	MKC ENTERPRISES INC.									1,723
IDD073114654	US ECOLOGY IDAHO, INC.							43,238		
ILD098642424	VEOLIA ES TECHNICAL SOLUTIONS				16					
ILD098642424	VEOLIA ES TECHNICAL SOLUTIONS,				214					
IND000646943	TRADEBE TREATMENT AND RECYCLING LLC			18						134
IND093219012	HERITAGE ENVIRONMENTAL SERVICES LLC									46,348
KSD980633259	FREDONIA-SYSTECH ENVIRONMENTAL CORPORATION			1,270						
KYD985073196	AES ASSET ACQUISITION CORP, DBA CLEAN EARTH OF CALVERT CITY					125		2,248		16,588
LAD000777201	CHEMICAL WASTE MANAGEMENT							12,154		
MAD047075734	TRIUMVIRATE ENVIRONMENTAL (MERRIMACK), INC.									227
MDD980555189	CLEAN HARBORS OF BALTIMORE INC									45,178
MID000724831	MICHIGAN DISPOSAL WASTE TREATMENT PLANT					2,927	11,235			
MID048090633	WAYNE DISPOSAL INC							431		
MID048090633	WAYNE DISPOSAL, INC. SITE #2 LANDFILL							10,334		
MID092947928	DRUG & LABORATORY DISPOSAL, INC.									15
MID980615298	PETRO CHEM PROCESSING GROUP OF NORTRU LLC		44	6,681						26,297
MID980991566	EQ DETROIT, INC.									21
NCD000648451	CLEAN HARBORS REIDSVILLE LLC									60
NCD986166338	VEOLIA ES TECHNICAL SOLUTIONS,									1,893
NED981723513	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.				17,130					40

Exhibit G-2
Quantities (kg) of Hazardous Wastes Likely to Contain PFAS Shipped to Commercial TSDFs in 2021, by CAP Management Category and Receiving Facility [a]

Handler ID	Handler Name	RECOVERY		TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Organics Recovery	Inorganics Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Underground Injection	
NJD002182897	SAFETY-KLEEN SYSTEMS, INC.	282,590								
NJD002200046	CYCLE CHEM, INC.									960
NJD002200046	CYCLECHEM,INC.			45						15,074
NJD002454544	VEOLIA ES TECHNICAL SOLUTIONS			116,421						10,014
NJD980536593	VEOLIA ES TECHNICAL SOLUTIONS									256
NMD002208627	ADVANCED CHEMICAL TREATMENT, LLC									1,391
NVD980895338	21ST CENTURY ENVIRONMENTAL MANAGEMENT OF NEVADA, LLC									2,170
NVT330010000	US ECOLOGY NEVADA, INC		115,685							
NVT330010000	US ECOLOGY NEVADA, INC.		836,227					7,545		
OHD000816629	SPRING GROVE RESOURCE RECOVERY INC.									848
OHD048415665	ROSS INCINERATION SERVICES INC				1,146					
OHD066060609	CHEMTRON CORPORATION									77
OHD083377010	ENVIRONMENTAL ENTERPRISES INC			208			295			
OHD093945293	VEOLIA ES TECHNICAL SOLUTIONS			1,134						
OHD093945293	VEOLIA ES TECHNICAL SOLUTIONS,			159						678
OHD980613541	HERITAGE THERMAL SERVICES INC				380,520					731
ORD089452353	CHEMICAL WASTE MANAGEMENT OF THE NW					44,222		24,145		
PAD085690592	REPUBLIC ENV SYS INC					668				5,211
RID040098352	NORTHLAND ENVIRONMENTAL, LLC									18,527
TND000772186	TRADEBE TREATMENT & RECYCLING OF TN									459
TND981920119	VLS - ARMOR, LLC									132
TXD000719518	TM DEER PARK SERVICES					1,097			464,555	

Exhibit G-2
Quantities (kg) of Hazardous Wastes Likely to Contain PFAS Shipped to Commercial TSDFs in 2021, by CAP Management Category and Receiving Facility [a]

Handler ID	Handler Name	RECOVERY		TREATMENT				DISPOSAL		TRANSFER/ STORAGE
		Organics Recovery	Inorganics Recovery	Fuel Blending	Incineration	Wastewater Treatment	Sludge Treatment/ Stabilization/ Encapsulation	Landfill	Underground Injection	
TXD000838896	VEOLIA ES TECHNICAL SOLUTIONS				5,773					181
TXD000838896	VEOLIA ES TECHNICAL SOLUTIONS,				128,087					
TXD055135388	SET ENVIRONMENTAL			24		39				2,159
TXD055141378	CLEAN HARBORS DEER PARK, LLC				17,016					
TXD069452340	US ECOLOGY TEXAS							32,173		
TXD069452340	US ECOLOGY TEXAS, INC.		998					134,340		8,954
TXD074196338	PHILIP RECLAMATION SERVICES HOUSTON LLC			1,770						41,395
TXD982290140	CLEAN HARBORS LAPORTE, LLC									6,982
TXD982560294	NSSI RECOVERY SERVICES									222
TXR000084621	SEABREEZE LANDFILL (SEABREEZE RECOVERY INC)						1,040			
TXR000085199	VLS HOUSTON							30		851
UTD981552177	CLEAN HARBORS ARAGONITE LLC				87,311					
UTD991301748	CLEAN HARBORS GRASSY MOUNTAIN LLC							680,390		
VTR000517052	ENPRO SERVICES OF VERMONT, INC.									15,887
VTR000517052	US ECOLOGY BURLINGTON, INC.									6,061
WAD020257945	BURLINGTON ENVIRONMENTAL LLC TACOMA									239
WAD020257945	BURLINGTON ENVIRONMENTAL, LLC TACOMA PLANT			144,834		2,374	30,938			153,950
WAD981769110	EMERALD SERVICES, INC									85
WID003967148	VEOLIA ES TECHNICAL SOLUTIONS,									124
Total		**282,590**	**958,626**	**272,828**	**784,917**	**51,451**	**54,250**	**982,267**	**464,555**	**962,701**

[a] Data current as of December 10, 2024.