

PERMIT ATTACHMENT D WASTE ANALYSIS PLAN

Introduction

The following information on Waste Analysis Plan was provided to the New Mexico Environment Department by Rinchem Company Inc., (**Rinchem**) in accordance with the requirements of the New Mexico Hazardous Waste Management Regulations 20.4.1.500 NMAC, incorporating 40 CFR §264.13, pursuant to 20.4.1.900 NMAC, incorporating 40 CFR §270.14(b)(2-3).

This Waste Analysis Plan (**WAP**) provides information about how Rinchem plans to accept, manage, and store hazardous wastes at their Albuquerque Container Storage Facility (**the Facility**) in order to meet the requirements of New Mexico Hazardous Waste Management Regulations 20.4.1NMAC, which incorporate by reference 40 CFR Parts 260 through 270. The WAP shall be included in the operating record that Rinchem shall keep on-site in the administration office. The waste stream that Rinchem shall be accepting for storage and subsequent transfer to a disposal facility are listed in Appendix B-1, Permit Attachment B, *Authorized Wastes*.

The procedures in the current WAP pertain to wastes that Rinchem will accept from off-site sources within the United States. Rinchem shall notify the Secretary in writing at least four weeks in advance of the date the first shipment of hazardous waste from a new waste stream is expected to arrive at the Facility. An example of the form to be used for waste acceptance is in Appendix D-1 (*Waste Profile Sheet*) of this Attachment.

Rinchem shall obtain a Permit from the EPA before it can accept hazardous waste from a foreign source.

Waste Characterization

In order to safely manage and store hazardous wastes Rinchem shall correctly characterize each hazardous waste stream.

Rinchem shall use the following four methods to characterize the hazardous waste they accept for management and storage before subsequent transfer to a permitted waste disposal facility:

- 1) Detailed Chemical Analysis
- 2) Acceptable Knowledge of Process (**KOP**) and published information

- 3) Hazardous Materials Categorization (**HazCat**) procedures
- 4) Chemical Fingerprint Checks

Knowledge of process (**KOP**) is the knowledge that a generator has about the waste, such as the chemical composition and content of the waste and the process that produced the waste. This knowledge helps with the determination of the waste characterization and is sufficient to determine both the hazards associated with management and storage and the requirements and restrictions for disposal. Existing published or documented data such as Material Safety Data Sheets (**MSDS**) on the hazardous waste or waste produced from similar processes can also be used. An example of the form used by Rinchem follows.

Rinchem shall submit the waste stream profile to a qualified laboratory with proper QA/QC procedures in place to perform a detailed chemical analysis of a sample of the waste stream when KOP is not adequate for determination of the safe management and storage procedures for the hazardous waste. The sample shall be sent to the lab together with a chain of custody form. The containers and preservatives used for the sample shall be specified by the lab doing the analysis. Testing parameters shall be chosen based on knowledge of the process from which the waste was produced and the information that the analysis yields about the waste, for example, BTU values, flashpoint, etc. The test methods that shall be used shall be those described in the most current version of EPA's publication titled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846" or comparable methods.

Hazard categorization (**HazCat**) procedures - the processes and tests described in "HazCat, Chemical Identification System" to identify unknowns (Turkington, 1988, or most current), or a comparable method shall be followed to help characterize solid and liquid wastes that cannot be positively identified by the generator or from labeling information. Rinchem's HazCat system has over a hundred tests which allow them to identify the hazardous characteristics of the waste material. The properties that shall be tested for include:

- C flammability levels
- C oxidizer characteristics
- C corrosive characteristics
- C reactivity
- C cyanides

- C halides
- C PCB present
- C pesticides
- C herbicides

Rinchem shall select specific parameters using Knowledge of Process information from the generator or any other applicable information about the characteristics of the waste. A chemical fingerprint check shall be performed on each incoming waste stream excluding labpacks and highly reactive wastes, to verify that the characteristics of the waste stream shall be consistent with the information provided by the generator and with the parameters listed on the profile for that waste stream. Fingerprint procedures shall be conducted according to published methods such as Turkington, 1988, or equivalent. The fingerprint parameters that may be tested or observed include:

- Physical state,
- Physical description,
- pH,
- Color,
- Ignitability,
- Specific gravity,

The above parameters shall be selected not only for the fact that they shall indicate that the waste is actually what the generator claims that it is, but they shall provide sufficient information about the waste so that it can be properly stored in a safe manner.

Pre-acceptance of a Waste Stream

For each new hazardous waste stream that is a candidate for storage at the Rinchem Facility, the following procedures shall be followed prior to notifying a generator that a waste stream can be accepted at the Rinchem facility:

- 1) The generator shall provide pertinent chemical and physical data requested on the waste profile sheet. Appendix J-1 contains waste profile sheets which show the information contained in the form. The profile includes a certification that any samples of waste submitted as part of the waste acceptance process shall be representative of the waste stream of interest, and that the generator shall notify Rinchem of known changes in the waste stream.
- 2) The generator shall provide Rinchem pertinent chemical and physical data and certifications requested to satisfy the land disposal restrictions (**LDR**) requirements specified under 20.4.1.800 NMAC, incorporating 40 CFR 268.
- 3) The data on the waste profile shall be verified as necessary through HazCat, chemical fingerprint checks or detailed chemical analysis of a representative sample of the waste.
- 4) After comparing the data supplied by the generator with that obtained by verification and assuring that Rinchem's chemical analysis contains all the information which must be known to store and dispose of the waste in accordance with New Mexico Hazardous Waste Management Regulations 20.4.1.500 NMAC, incorporating 40 CFR §264 and 20.4.1.800 NMAC. Pursuant to §268, Rinchem shall determine the acceptability of the waste based on the requirements of the regulations and this Permit.

Physical Acceptance of Waste at the Facility

Except in the case of labpacks and highly reactive wastes, upon arrival of a waste shipment at the Facility, a determination shall be made to insure that the customer had sent what was profiled and accepted. First, a verification shall be made that a pre-acceptance inspection sheet (**PAIS**) has been filled out for the generator's shipment of waste. An example of what a PAIS might contain is attached herein as Appendix J-2 of this Attachment. Secondly, the manifest and LDR form shall be compared with the profile (which shall be kept in the facility office) to make sure that they match. Some of the items that shall be compared include the waste description and the U.S. Department of Transportation (**DOT**) shipping information. Next, a fingerprint analysis (discussed above), shall be performed, which shall provide reasonable assurance that the waste shipped from the generator agrees with the accompanying manifest. The results of the fingerprint testing of a given waste stream shall be compared to the values obtained from previous shipments of the waste stream and the waste profile sheet and shall be required to fall within an established tolerance limit.

The minimum number of containers that shall be sampled from each shipment of a waste stream shall be determined according to the cube root procedure, Method D 140-70 of the American Society for Testing and Materials (ASTM).

For a typical load, the cube root procedure and formula provide the following:

NUMBER OF DRUMS RECEIVED	NUMBER OF DRUMS SAMPLED
1	1
2-8	2
9-27	3
28-64	4
65-125	5

The hazardous waste drums to be sampled shall be chosen at random by the person taking the samples. The sampling shall take place in a well ventilated area of the Facility such as the dock.

One of the methods referred to in 20.4.1.200 NMAC, incorporating 40 CFR §261, Appendix I, or an equivalent procedure approved by the Secretary shall be used to obtain representative samples of the waste by employees wearing personal protective equipment (PPE). Typically, the employee's PPE shall include goggles or safety glasses, gloves and an apron or coveralls. Rinchem's Health and Safety Plan shall be followed.

The method of sampling that shall most frequently be used, unless the technology changes, shall be sampling of containerized liquid waste with a "Composite Liquid Waste Sampler (COLIWASA). The COLIWASA is an effective representative sampler for homogeneous and multilayer liquids. Disposable glass COLIWASAs shall be used except when sampling hydrofluoric acid and strong alkali solutions, when a teflon one shall be used. A separate COLIWASA shall be used to sample each container. Figure J-1 is a schematic diagram of a COLIWASA type sampler.

Some of the hazardous wastes received at the facility shall be labpacks of small quantity chemical wastes which can be categorized into several types:

- FIG. D-1

- Excess or residual reagent chemicals
- Off-specification or expired chemicals
- Relatively small quantities of chemical solutions or mixtures of known composition
- Laboratory solid waste material

In most cases, knowledge of process may be sufficient to determine both the hazards associated with the management and storage of labpack wastes and the requirements and restrictions for its disposal; therefore, analytical testing may not be conducted on these wastes. The cube root procedure mentioned above shall be used to determine the number of containers in each labpack waste stream that shall be inspected for conformity of the paperwork list with the container contents.

In the case of highly reactive wastes being shipped for treatment at other off-site treatment, storage, and disposal facilities, the inspection process may entail no more than inspecting the container for proper packaging and labeling in order to protect the employees.

Unacceptable Waste Shipments

The Hazardous Waste Coordinator or his Designee shall qualify a waste shipment as unacceptable when any of the following conditions exists:

- Failure of the generator to pre-qualify the waste stream or provide appropriate data;
- Waste shipments that contain components that Rinchem is prohibited from accepting for storage and disposal, such as radioactive and/or explosive wastes;
- Improper or inappropriate packaging, labeling, or manifesting;
- Characteristic quantity or composition discrepancy between the waste and the waste manifest or profile;
- Values for fingerprint analysis parameters that shall be out of the tolerance levels set by Rinchem; and
- Lack of generator credit approval.

The Hazardous Waste Coordinator (or Designee) must also classify the waste as unacceptable by Rinchem if it is significantly different in composition or volume from the information shown on the waste profile sheet, the pre-acceptance analytical data of the representative sample, or on the manifest. Containers shall be counted to determine any waste quantity discrepancies.

Wastes found to be in non-conformance shall be rejected on the spot or they may be reevaluated for possible acceptance by the Facility despite the variance. Rinchem's reevaluation procedure shall be designed to determine whether a waste material can be handled at the facility and whether the generator concurs with the characterization conducted by the Facility. The Hazardous Waste Coordinator shall evaluate the hazardous waste shipment brought to the Container Storage Facility using the following criteria:

- Rinchem Company Inc./Facility requirements
- discussions with the generator
- facility parameters for waste storage
- the need for additional supplemental analysis

If all of the above parameters, including supplemental chemical analytical data indicate that the waste can be accepted and the generator concurs, new manifests or profiles shall be created as necessary to ensure compliance. If a discrepancy cannot be resolved within 10 days of the hazardous waste shipment receipt, the waste shall be returned to the generator and the Secretary shall be notified in writing of the discrepancy and the attempts to reconcile it.

Waste Tracking and the Operating Record

Rinchem shall maintain a written record and a computerized system of all manifested wastes that enter the Facility, as required by 20.4.1.500 NMAC, incorporating 40 CFR §264.73(a). This operating log shall contain a listing of all manifested wastes being received and shipped, the location of waste within the Facility storage rooms, the quantity and description of the wastes, the name of the generator, and the final destination of the waste. The operating record shall also contain all waste profiles delivered to Rinchem, waste acceptance and QA/QC forms. Once a waste shipment has been analyzed and accepted, the containers in the shipment shall be appropriately marked/labeled so that they can be tracked within the Facility. The containers shall be moved to the appropriate storage area based on the hazard class and compatibility of the waste.

Analysis Review

The pre-acceptance evaluation of a hazardous waste stream shall be repeated when a generator notifies Rinchem that the process generating the waste has changed or if Rinchem has reason to suspect that the waste is not in conformance with available pre-acceptance documentation. In the case of a change in the process generating the waste, the generator must submit a new waste profile sheet and sample data. The waste stream shall also be re-analyzed by Rinchem if a waste shipment received at the Facility does not match the waste designated on the accompanying manifest or shipping paper.