

THE HANFORD SITE: INTEGRATION OF RCRA AND CERCLA THROUGH A TRI-PARTY AGREEMENT

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ABSTRACT

A goal of the U.S. Environmental Protection Agency (EPA) is to integrate the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at hazardous waste sites where both laws may apply. On May 15, 1989, the EPA, Washington State Department of Ecology (Ecology), and the U.S. Department of Energy (DOE) entered into an Interagency Agreement to provide a legal and procedural framework for cleanup and regulatory compliance at the at DOE's Hanford Site, which contains numerous waste sites. This document is entitled the Hanford Federal Facility Agreement and Consent Order. Hereafter, it is referred to as the "Tri-Party Agreement" or the "Agreement".

The objective of this paper is to describe a creative approach to integration of the RCRA and CERCLA programs and to explain the development of an efficient, productive working relationship between the two regulatory agencies, EPA and Ecology, and the owner of the Hanford Site, DOE.

INTRODUCTION

The Hanford Site is the largest CERCLA site in the nation, encompassing 560 square miles in Southcentral Washington. The site is bordered to the east by the Columbia River and is adjacent to the northern boundary of the city of Richland, Washington (see Fig. 1). Four general areas of the Hanford Site were proposed for inclusion on EPA's National Priorities List (NPL) on June 24, 1988. A Federal Register notice on October 4, 1989, finalized the proposal and the four areas were listed on the NPL. These four areas include over 1000 inactive waste disposal and unplanned release sites, ranging in scope from minor spill areas to burial grounds up to 100 acres in size. Located within these areas are 55 RCRA treatment, storage, or disposal (TSD) groups which contain over 300 individual RCRA units that will be either be closed or will be permitted to operate in accordance with RCRA and State of Washington Dangerous Waste requirements. Several of the RCRA disposal units and some of the RCRA storage units have contributed to release of contamination to the environment and, therefore, need to be addressed under the investigation and remediation programs.

The areas include significant amounts of contamination. Estimates of the extent of soil contamination exceed a billion cubic yards, and there are known plumes of contaminated groundwater totaling over 230 square miles. The contamination is in the form of RCRA hazardous and/or radioactive mixed wastes (hazardous waste mixed with either high-level or low-level radioactive waste, the hazardous component of which is subject to RCRA regulations) and

CERCLA hazardous substances (such as radioactive wastes which are not regulated under RCRA).

The State of Washington has received authorization from EPA to implement the state's dangerous waste program in lieu of the federal RCRA program. This authorization includes provisions to regulate radioactive mixed waste. The state is currently planning to apply for authorization to implement the Hazardous and Solid Waste Amendments of 1984 (HSWA). Therefore, an argument could be made that all of the hazardous or mixed waste units could be investigated and remediated under either RCRA/HSWA authority, eventually to be delegated to the state, or under CERCLA authority. The EPA can not delegate its CERCLA authority to the state.

There was also a concern of how to deal with contaminated groundwater plumes which contained contaminants from both CERCLA units and RCRA regulated units. The issue of the proper regulatory authority to use in each case had to be considered during negotiation of the Tri-Party Agreement. The DOE was very concerned that only one regulatory agency direct the investigation and remediation at each unit and that cleanup standards be consistent under the RCRA and CERCLA authorities. This resulted in the Lead Regulatory Agency concept, under which EPA and the state maintain their respective authorities but may delegate responsibilities to the other regulatory agency.

SCOPE AND OBJECTIVES OF THE TRI-PARTY AGREEMENT

It is EPA's policy to enter into Interagency Agreements with federal facilities which are listed on the NPL. The requirement for an Interagency Agreement in accordance with Section 120 of CERCLA has been met by the Tri-Party Agreement, since this Agreement covers activities from the

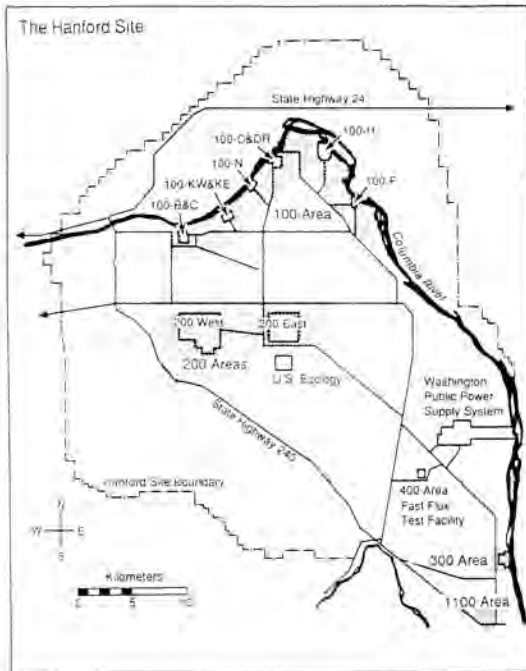


Fig. 1. Proposed Aggregate National Priorities List (NPL) Areas.

beginning of the investigations through remedial actions. The EPA encourages its state counterparts to be involved with such agreements since, in many cases, the states' cleanup standards will be applicable or relevant and appropriate to a CERCLA action. In this case, Ecology already had an ongoing RCRA program at the Hanford Site, and the need for an active state role in the Interagency Agreement was even more evident. The formal negotiations for the Tri-Party Agreement began in February 1988, resulting in a draft document which was issued for public comment in February 1989. The final Agreement was signed and became effective on May 15, 1989.

The three parties recognized the need to incorporate the CERCLA program, the federal RCRA/HSWA program, and the state's Dangerous Waste program into the Agreement in an integrated manner. This resulted in the term "Tri-Party Agreement". As such, the scope of the Agreement includes all CERCLA remedial actions and RCRA/HSWA corrective measures. The Agreement also includes activities related to RCRA interim status compliance, RCRA permitting, and RCRA closure activities -- all of which apply to TSD units that last received hazardous waste after November 19, 1980.

There were numerous specific objectives that the parties intended to meet through the Tri-Party Agreement. A major objective was to bring the Hanford Site into full RCRA compliance and to achieve full cleanup within 30 years. The parties considered this a reasonable time, based on the extent of contamination, complexity of the site and

wastes involved, the need for development of new technology, and realistic expectations for funding. Another objective was to create a clear picture of the work that needs to be done by specifying detailed schedules and milestones. This type of planning is necessary to support requests for the large amounts of money that DOE will need over the next 30 years. Another specific objective, as noted above, was to provide specific roles and a plan of interaction between the regulatory agencies. All three parties considered this to be an essential element in order to minimize potential conflicts and disputes, to maximize the use of available resources, and to avoid duplication of effort as the Agreement is implemented over the years. Another objective focused on a coordinated RCRA-CERCLA public involvement process, in order to provide a consistent format for the public.

RCRA - CERCLA INTEGRATION

Because of the large number of sites or units to be investigated and remediated at Hanford, the use of the CERCLA "operable unit" concept was seen as necessary. The parties agreed to divide the site into 74 operable units (see Fig. 2), plus four groundwater operable units. Each of the operable units will undergo a separate investigation and remediation process, on a priority basis. The criteria used for assignment of specific waste management units to operable units are identified in the Tri-Party Agreement, as are the criteria for prioritization of operable units for scheduling purposes.

There has been a recent effort by EPA to provide better coordination between the RCRA and CERCLA programs, specifically in regard to remedial actions or corrective measures. Some of the primary examples of this effort are the

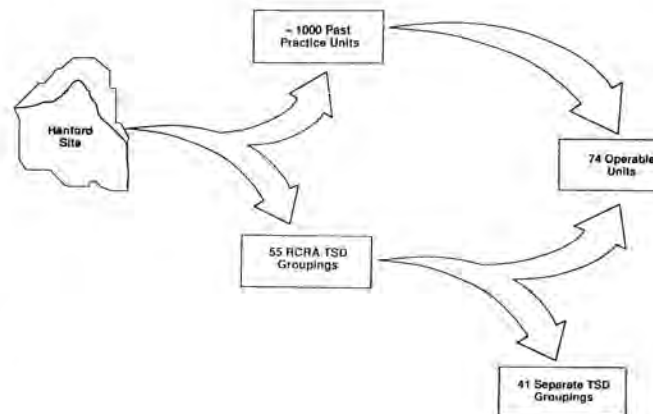


Fig. 2. RCRA/CERCLA Integration.

requirement to adhere to applicable or relevant and appropriate requirements as part of CERCLA remedial actions, elimination of RCRA permitting requirements for certain activities during CERCLA remedial actions, significant enhancement of quality assurance provisions to RCRA laboratory protocols (SW-846), EPA's corrective action rule which contains significant parallels to the CERCLA approach, and EPA's evaluation of a RCRA "de minimus rule" (yet to be proposed) which would consider cleanup standards for listed wastes as something other than background concentrations. In short, there is a recognition of the need to draw these two statutes closer together, whenever possible, to eliminate conflicting procedures and requirements. The EPA's general approach to the private sector (i.e., non-federal facilities) is that if RCRA applies at a facility, the EPA will not pursue that facility through the CERCLA NPL ranking process. All of the cleanup or corrective actions would be taken under RCRA authority. At federal

facilities, both the RCRA and CERCLA statutes apply and, therefore, a rationale approach to integration is necessary.

The parties have also integrated certain administrative elements of RCRA and CERCLA, in addition to technical elements. For instance, a single set of administrative records is being maintained by DOE and its contractors. As a federal facility, DOE is required to maintain the administrative record under CERCLA. Since many of the CERCLA activities are closely tied to RCRA work, the parties decided that DOE would maintain one overall set of administrative records, to include both RCRA and CERCLA. The system, which is now in place, allows sorting of the data base in a number of different ways, allowing the user maximum utility by reviewing an entire record or by extracting specific components. Another task that was viewed as a cost-saving, practical step was the consolidation of the public involvement activities under RCRA and CERCLA. A significant amount of time was spent develop-

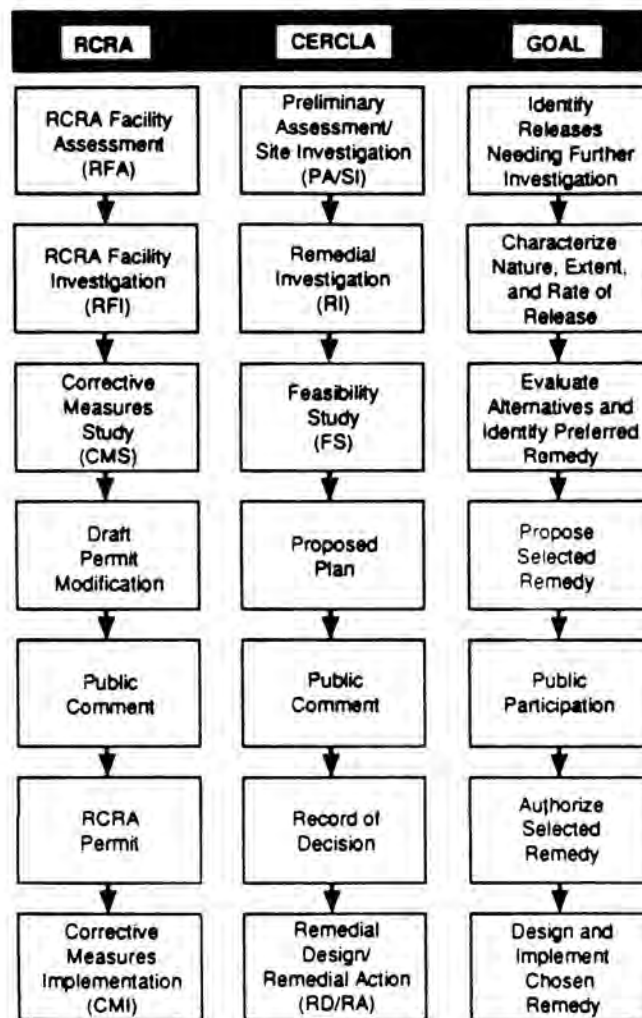


Fig. 3. RCRA/CERCLA Comparison.

ing the joint Community Relations Plan to merge the requirements of both programs into a single process. This will serve to simplify the process for both the parties and the public and will maximize the efficiency of available resources used for public involvement.

RCRA AND CERCLA AUTHORITIES FOR PAST PRACTICE UNITS

The parties reached agreement that any of the operable units could be managed under either RCRA or CERCLA. This was a major step during negotiations. Accordingly, each of the first 20 operable units has been assigned to either the RCRA corrective action program or the CERCLA remedial action program for investigation and remediation. Additional assignments will be made annually, along with the work schedule annual update. The Tri-Party Agreement requires that EPA and Ecology designate the regulatory process to be used at these additional operable units.

Most of the past-practice activities involved mixed waste. Therefore, the first area of agreement between the parties was that, in general, the radioactive component of mixed waste would be addressed as part of a RCRA corrective measure. This does not extend RCRA or state Dangerous Waste authority to regulate radioactive wastes; rather it provides an understanding that DOE has agreed to address radioactive wastes as part of a comprehensive investigation and corrective action at an operable unit, whether the operable unit is being managed under RCRA or CERCLA. The Agreement states that "the corrective action process selected for each operable unit shall be sufficiently comprehensive to satisfy the technical requirements of both statutory authorities and the respective regulations" (see Fig. 3). It is important to note that the "authority" for radioactive wastes remains under CERCLA. This agreement eliminates the potential for a worst-case scenario -- the redundant application of requirements of both programs at the same unit, a situation which would not serve the best interest of any party or the public.

The success of this approach requires flexibility in interpretation of the statutes and regulations by EPA and Ecology and is predicated on certain assumptions and requires some concessions on the part of all parties. It also provides a solid framework under which the parties can work cooperatively toward cleanup of the Hanford Site.

INCLUSION OF RCRA LAND DISPOSAL UNITS IN OPERABLE UNITS

Eighteen of the operable units contain significant RCRA land disposal units that received hazardous waste or mixed waste after November 19, 1980. All of these TSD units are scheduled for closure under RCRA and, therefore, operational activities at these units will not be included in the Hanford RCRA permit. In some cases, the units will be covered in the Hanford RCRA permit for post-closure

activities. The remaining 41 TSD groups contain primarily storage and treatment units. These storage and treatment groups have not been assigned to operable units, since the level of investigations required for storage or treatment Part B permit applications and closure plans is less comprehensive than that required for land disposal units (see Fig. 2). Accordingly, the schedule for submittal of Part B applications and closure plans for these groups is separate from the operable unit schedule. The need for RCRA - CERCLA integration obviously centered around those operable units which contained the RCRA TSD groups. The parties agreed to the basic approach that the RCRA land disposal groups would be investigated concurrently with the past-practice sites within the operable unit and that the overall priority and schedule for the operable unit would drive the schedule for submittal of the closure plans and post-closure Part B applications. In order for this approach to be successful, the parties had to agree that a CERCLA RI/FS for an operable unit would yield a sufficient level of detail that a RCRA closure plan or post-closure Part B application could be developed from the RI/FS information. As with the integration of past-practice units, the worst case scenario from an efficiency standpoint, would be a duplication of effort by EPA and Ecology, using their different authorities.

In some cases, identically designed units located side-by-side may have received the same RCRA regulated waste streams, differing only in the date on which waste receipt ended. If that date was after November 19, 1980, the unit would be a RCRA TSD unit. If the date was prior to November 19, 1980, the unit would be regulated as a past-practice unit under either RCRA/HSWA or CERCLA. The parties concurred that a single investigation and coordinated timing for a remedial action and closure activity would be the most efficient method of dealing with this issue. For this reason, the parties agreed that only one investigative process - either RCRA or CERCLA - would be used within an operable unit. As stated earlier, this approach required agreement that the investigative procedures of CERCLA and RCRA as implemented at the Hanford Site would provide results that could be used to support technical decisions under either program.

LEAD REGULATORY AGENCY CONCEPT

The design of an efficient and comprehensive regulatory compliance and cleanup program for implementation under the Tri-Party Agreement incorporated numerous factors. One major factor, the integration of RCRA and CERCLA processes, has been discussed above. Before this system could begin to work, the parties had to come to agreement on another major element -- the role of the two regulatory agencies. One can envision numerous logistical and efficiency problems that would be encountered if both

regulatory agencies were to insist on full involvement with their respective authorities.

It became apparent early in the negotiations that a work-sharing approach for the regulatory agencies would be necessary. This approach was carefully crafted in the Agreement so that "responsibilities" were shared and clearly spelled out, recognizing that "authorities" could not be transferred arbitrarily between EPA and Ecology. In this way, the regulatory agency with the responsibility for oversight can fulfill its obligation to keep the projects running as efficiently as possible, obtaining the co-signature of the agency having authority, when necessary.

The concept of a lead regulatory agency was developed for the regulatory oversight of each operable unit. Its definition and use is restricted to that level. The EPA and Ecology will decide which agency will be assigned as the lead regulatory agency in each case. Such assignments have been made for the first 20 operable units and additional assignments will be made in conjunction with each annual update of the work schedule. Whichever regulatory agency is not designated as the lead regulatory agency will automatically be designated as the support agency. The roles are defined in the following discussion.

LEAD REGULATORY AGENCY RESPONSIBILITIES

The lead regulatory agency is responsible for overseeing all activities that are related to a given operable unit. This may include a combination of RCRA TSD and CERCLA work, RCRA TSD and RCRA corrective action work, or CERCLA work without any RCRA activity. The lead regulatory agency serves as the primary contact for DOE, the support agency, or the public regarding any questions or issues at the operable unit.

Ecology may serve as the lead regulatory agency for operable units that have been designated under either RCRA past-practice program or the CERCLA program. Likewise, EPA may be the lead regulatory agency for such operable units. Ecology and EPA have agreed to certain general criteria in the Agreement for designating the lead regulatory agency. Much of this centers around whether significant TSD units are present in the operable units. Such operable units would generally be assigned to Ecology, and the RCRA past-practice authority would typically be used. Since there are only 18 of these situations, as discussed earlier, this criterion will have no effect on the majority of the assignments. For those operable units involving only radioactive waste, EPA would generally be the lead regulatory agency and the CERCLA process would likely be designated.

One important criterion for the designation of the lead regulatory agency is the availability of each agency's resources at any point in time to provide adequate oversight of the activities at the operable unit. Maintaining the proper

balance of resources will be an ongoing effort by both regulatory agencies.

SUPPORT AGENCY RESPONSIBILITIES

Both EPA and Ecology believe that it is important that the support agency stay informed of the progress at every operable unit. In some cases, the lead regulatory agency and the support agency roles may be reversed at adjacent or nearby operable units. These situations will require close coordination of field activities and data, since technical information obtained at one operable unit may overlap to another. Certainly, the level to which the support agency can become involved will depend upon available resources and the issues at hand. The support agency may submit comments on work plans or other documents submitted by DOE for review. In such cases, the support agency will submit its comments to the lead regulatory agency in order to maintain a single point of contact and to avoid the potential for DOE to receive conflicting comments from the regulators.

SUMMARY

The two processes described above for designation of the regulatory process and of the lead regulatory agency at each operable unit form a basic structure on which the Tri-Party Agreement is implemented. While the approach may seem simple from an overall view of efficiency and "what makes sense", the construction of this approach into a working document was a complex task. It required a substantial amount of up-front technical work to accurately identify the universe of waste sites and to design and prioritize the operable units. From that point, it required significant negotiations between EPA and Ecology to determine appropriate regulatory processes and lead agency responsibilities for the operable units. This type of Interagency Agreement has been referred to as a "carve out agreement", since much of the workload distribution, has been determined prior to signature of the document. By expending a large amount of effort in up-front planning, the parties believe that the total resource needs for this project have been established with some degree of accuracy. This makes it much easier for each party to identify and justify its resource needs over both the short and long term.

The potential sources of conflict and confusion, as described above, were recognized early in the process of the Tri-Party Agreement negotiations and were primary topics throughout the negotiations. The solutions arrived at in the Agreement required maximum use of flexibility available within the regulations and a desire on the part of all parties to arrive at a reasonable and effective framework for achievement of cleanup and compliance.

PRESENT STATUS

The bottom line of any methodology can be simply stated as "Does it work?". The parties to this Agreement are

now nine months into implementation. At this point, we are still staffing up and developing some of the detailed procedures necessary for efficient implementation. To date, work plans have been submitted for the first seven operable units. Four of these are under the CERCLA process with EPA as the lead regulatory agency and three are under the RCRA process with Ecology as the lead regulatory agency. One of the RI/FS work plans has been approved and field activities are on schedule.

There are some technical and policy issues that have arisen during implementation of the Agreement. The parties have either resolved or continue to work on issues such as long-term land use at the Hanford Site, "how clean is clean", point of compliance, integration of source operable units with their respective groundwater operable units, budget and scheduling, RCRA listed waste determinations, RCRA land disposal restrictions, and development of specific procedures, just to name a few. One area that presents a major challenge is the proper planning on the part of DOE to obtain the necessary funding to support all of the work, without allowing the schedule to slip. The federal budget process requires that the estimates for necessary funding be made over two years in advance of when the money will be needed. The accuracy of this forecasting will improve as the parties gain more experience in the process.

The regulators are pursuing ways of streamlining the processes associated with cleanup, while still maintaining the necessary degree of technical quality. DOE is beginning to investigate administrative methods that will make the best use of available funds. If the three parties continue to work

together toward the goal of streamlining, the cost of cleanup and compliance can be reduced.

APPLICABILITY TO OTHER FACILITIES

Many federal facilities are currently negotiating cleanup and compliance agreements with EPA and state agencies. As these facilities are added to the NPL, some are faced with the potential conflicts of concurrent application of CERCLA and RCRA. To the extent that it may apply, the approach used by DOE, the State of Washington, and EPA could be used as a framework or model for negotiations between such federal facilities and the regulators. The experience gained at Hanford may be useful to other negotiators to foresee and eliminate many of the conflicts and redundancies of RCRA, CERCLA, and state regulatory programs, resulting in a streamlined approach to cleanup and compliance.

One must keep in mind that this approach was developed specifically for the Hanford Site, due to its size, the number of units, the state's authorization status and its involvement and commitment to regulatory compliance and cleanup, and the number of situations which would require the integration of RCRA and CERCLA. This approach may not be totally appropriate for all sites at which RCRA - CERCLA integration is an issue. It can only work when all of the parties negotiate in a cooperative manner and when EPA and the state are willing to place a significant amount of trust and confidence in each other.