RECORD OF DECISION AMENDMENT
ALLIED CHEMICAL/IRONTON COKE SUPERFUND SITE
IRONTON, OHIO

Valdas V. Adamkus
Regional Administrator

7/31/95
Date

RECORD OF DECISION AMENDMENT

I. INTRODUCTION

The Allied Chemical/Ironton Coke Superfund Site, located in Ironton, Lawrence County, Ohio is approximately 95 acres in size. The site consists of a dismantled Coke Plant which operated from 1920 to 1982 and five lagoons which received process wastewater and hazardous solid waste from the former Coke Plant. A waste pit called the Goldcamp Disposal Area is also part of the site. In addition, an operating AlliedSignal Tar Plant is within the site boundaries. The Allied Chemical/Ironton Coke site is divided into two operable units, the Goldcamp Disposal Area (GDA) and the Coke Plant/Lagoon Area (CPLA).

The GDA Record of Decision (ROD) which describes the GDA site remedy was executed on September 29, 1988. The remedial design/remedial action (RD/RA) for the GDA is through a Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 Section 106 Unilateral Administrative Order. The Unilateral Administrative Order (UAO) was issued to AlliedSignal, Inc. and Amcast Industrial Corporation on March 9, 1989. AlliedSignal has complied with the UAO.

The CPLA RD/RA is also through a CERCLA Section 106 Unilateral Administrative Order which was signed on July 1, 1991 and was issued to AlliedSignal, Inc. The CPLA remedy was finalized through the ROD signed on December 28, 1990.

During the pre-design and design of the CPLA remedy, new information has been identified which has resulted in four fundamental changes to the CPLA ROD. Change 4 will also affect the GDA ROD. Pursuant to CERCLA Section 117 and the National Contingency Plan (NCP), Section 300.435(c)(2)(i), the United States Environmental Protection Agency (U.S. EPA) is publishing this ROD Amendment. A Proposed Plan was published on March 6, 1995, followed by a 30 day public comment period which ended on April 4, 1995. This ROD Amendment will become part of the Allied Chemical/Ironton Coke Administrative Record (NCP 300.825(a)(2)), which is available for review at the Briggs Lawrence County Library, located in Ironton, Ohio. The information used in U.S. EPA's assessment of these changes is currently available at the above repository.

II. REASONS FOR ISSUING THE ROD AMENDMENT

During the pre-design and design for the CPLA, new information was discovered in which fundamental changes to the original CPLA and GDA ROD's are required. This ROD Amendment documents four fundamental changes that will affect the CPLA ROD and one of the four changes that will affect the GDA ROD.

The remedy as described in the original ROD for the GDA operable unit consists of the

following:

- Installation of a Resource Conservation Recovery Act (RCRA) Subtitle C compliant cap over the waste pit.

- Construction of a slurry wall around the waste pit to limit infiltration of groundwater into the waste pit.

- Continuous extraction and on-site treatment of groundwater within the slurry wall/cap system.

- Extraction and on-site treatment of contaminated groundwater outside the slurry wall/cap containment system until groundwater cleanup standards have been met. Implementation of deed restrictions, fencing, and security.

Construction of the GDA remedy is scheduled to be completed in August 1995 and operation and maintenance of the slurry wall/cap and groundwater pump and treatment system is expected to occur for thirty years. The cost of the GDA remedy including capital cost and operation and maintenance is approximately $28 million over the life of the project.

The original CPLA ROD selected the following remedy:

- Incineration of approximately 122,000 cubic yards of lagoon waste materials and on-site re-use of the waste heat generated during incineration (Waste Fuel Recovery).

- In-situ bioremediation of approximately 457,000 cubic yards of lagoon waste material.

- Prepared pad surface bioremediation of approximately 40,000 cubic yards of contaminated soil materials.

- Pumping and on-site treatment of groundwater.

- Downgradient groundwater monitoring of Ice Creek and preparation of a contingency plan. Implementation of deed restrictions, fencing, and security.

The design for the bioremediation and groundwater pump and treatment systems will be completed in September 1995. Site preparation for the bioremediation and groundwater pump and treatment systems began in March 1995. Construction of the bioremediation and groundwater pump and treatment system is scheduled to be completed in late 1996. The bioremediation and groundwater pump and treatment systems are expected to operate for thirty years. The design of the incinerator will be completed in mid-1997 and startup is scheduled for early 1998. The cost of the CPLA remediation is approximately $150 million

over the life of the project.

III. DESCRIPTION AND EVALUATION OF THE NEW ALTERNATIVES

The Administrative Record, located at the Briggs Lawrence County Library is available for review and contains the information which was used to evaluate the alternatives for the four fundamental changes. The U.S. EPA uses nine evaluation criteria as set forth in the National Contingency Plan, 40 CFR Part 300.430, to evaluate the four fundamental changes and the different alternatives associated with each change. The alternative for each fundamental change which complies with Criteria 1 and 2, achieves the best balance among Criteria 3-7, and considers Criteria 8 and 9 is the one chosen.

The nine evaluation criteria are listed below:

Criteria 1 - Overall Protection of Human Health and Environment addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

Criteria 2 - Compliance with Applicable of Relevant and Appropriate Requirements (ARARs) addresses whether or not a remedy will meet all other Federal and State environmental statutes and/or provide grounds for issuing a waiver.

Criteria 3 - Long-Term Effectiveness and Permanence refers to the amount of risk remaining at a site and the ability of a new remedy to maintain reliable protection of human health and the environment over time once cleanup standards have been met.

Criteria 4 - Reduction of Toxicity, Mobility, or Volume through Treatment is the anticipated performance of the treatment technologies that may be employed in a remedy.

Criteria 5 - Short-Term Effectiveness refers to the speed with which the remedy achieves protection, as well as the remedy's potential to create adverse impacts on human health and the environment that may result during the construction and implementation period.

Criteria 6 - Implementability is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement the chosen solution.

Criteria 7 - Cost addresses the estimated capital and operation and maintenance costs, as well a present-worth cost. Present worth is the total cost of an alternative in terms of today's dollars.

Criteria 8 - Support Agency Acceptance indicates whether, based on its review of the ROD Amendment, the support agency (usually a state environmental agency concurs with, opposes or has no comment on the recommended alternative.

Criteria 9 - Community Acceptance will be assessed in the Record of Decision following a review of the public comments received on the Proposed Plan Amendment.

FUNDAMENTAL CHANGE 1

Alternative 1 - Removal of the waste heat boiler from the incineration process, thereby eliminating the production of steam for the Allied Signal Tar Plant (waste fuel recovery).

The original ROD for the CPLA required the addition of a waste heat boiler to the incineration process to produce steam for the AlliedSignal Tar Plant located on-site. Waste material to be incinerated includes 122,000 cubic yards of lagoon 5 waste which contains K087 (Decanter Tank Tar Sludge from Coking Operations) listed hazardous waste. In addition, approximately 30,000 cubic yards of coal/coke fines which remain from the former coke plant will be blended with the lagoon 5 waste.

The Resource Conservation Recovery Act (RCRA) regulations state that if K087 waste material is recycled, the ash produced by the incinerator is classified as non-hazardous. Removing the waste heat boiler and not producing steam for the AlliedSignal Tar Plant therefore, removes the incinerator ash exemption as described in the RCRA 40 CFR Part 261. With the elimination of the K087 exemption, AlliedSignal will be required to submit an acceptable delisting petition for the incinerator ash. A delisting petition is a document prepared by AlliedSignal which must show that the incinerator ash no longer contains K087 waste or other compounds at hazardous levels. If U.S. EPA determines that the incinerator ash is no longer hazardous, it can be disposed of in a licensed solid waste landfill instead of a hazardous waste landfill. Therefore, prior to beginning the incineration process, levels that can remain in the ash will be determined to ensure that the ash is non-hazardous. Throughout the incineration, the ash produced will be sampled and analyzed to determine if contaminants in the ash are above the delisting levels. If the ash cannot meet the delisting levels, the ash will not be allowed to be disposed of in a non-hazardous waste landfill without further treatment. If AlliedSignal cannot submit an acceptable delisting petition, other options for the incinerator ash will be explored. Removal of the waste heat boiler will save approximately $3 million.

Alternative 2 - No Action (Retain the waste heat boiler in the incineration process).

In this alternative, the waste heat boiler would remain in the incineration process as described in the December 1990 ROD.

Fundamental Change 1 - Comparative Analysis of Alternatives

In comparing Alternative 1 (remove waste heat boiler) and Alternative 2 (retain waste heat boiler), Criteria 1,3,4 and 5 are equivalent and have no effect on the comparative analysis. Criteria 2 (Compliance with ARARs), Criteria 6 (Implementability), and Criteria 7 (Cost)

affect the comparative analysis. First, removal of the waste heat boiler would affect the incinerator ash exemption pursuant to 40 CFR 261.3(c)(2)(ii)(B) and 40 CFR 261.6(a)(3)(vii) as described in the original ROD. Since removal of the waste heat boiler would eliminate the recycling of K087 waste located in lagoon 5, the incinerator ash will have to be delisted. If the incinerator ash can be delisted, which is pursuant to AlliedSignal submitting an acceptable delisting petition, the ash will be disposed of in a licensed solid waste landfill. Second, if the waste heat boiler is removed, implementability would be improved since less maintenance would be required. Finally, cost would be reduced by approximately $3 million if the waste heat boiler is removed.

After comparing the removal of the waste heat boiler versus retaining the waste heat boiler through the use of the nine criteria, removal of the waste heat boiler (Alternative 1) is the selected remedy. The State of Ohio concurs with the removal of the waste heat boiler. No public comments were received concerning this change.

FUNDAMENTAL CHANGE 2

Alternative 1 - Removal of the ROD dismantlement provision for the incinerator.

In the December 1990 ROD, the U.S. EPA required that the incinerator be dismantled after the incineration of the lagoon 5 waste and the coal/coke fines is complete. U.S. EPA has now determined that there is no environmental benefit gained by the dismantling of the incinerator, provided it is not operated after the time the incineration of the lagoon 5 waste and the coal/coke fines is completed. Leaving the incinerator on the site will not interfere with any other portion of the remedy. Therefore, there is no reason for U.S. EPA to require that the incinerator be dismantled. However, once the incineration is complete for the CPLA, AlliedSignal will not be allowed to operate the incinerator for the destruction of waste or materials from the AlliedSignal Tar Plant or other sources without obtaining an Ohio Environmental Protection Agency (Ohio EPA) permit. The Ohio EPA permit process includes public involvement in the decision making.

Alternative 2 - No Action (Retain the dismantlement provision for the incinerator).

This alternative would require AlliedSignal to dismantle the incinerator after the incineration of the site waste material has been completed.

Fundamental Change 2 - Comparative Analysis of Alternatives

Comparing Alternative 1 (Removal of the dismantlement provision for the incinerator) and the No Action Alternative (Remove the incinerator after completion of incinerating the lagoon 5 waste and coal/coke material) all the criteria would be equivalent except the cost of dismantling may be higher than the cost of leaving the incinerator on-site, but not operating. U.S. EPA will require AlliedSignal to obtain an Ohio EPA permit if they choose to operate

the incinerator after the cleanup is completed.

Alternative 1 is the only choice in this comparison; therefore. the U.S. EPA is removing the incinerator dismantlement provision. The Ohio EPA concurs and no public comments were received concerning this change.

FUNDAMENTAL CHANGE 3

During the design phase for the CPLA, approximately 135,000 cubic yards of soil located near the former coke plant and contaminated with PAH_c above the 0.97 ppm cleanup standard were recently identified. The newly discovered contaminated soils, identified as the "site soils," are estimated to have an average PAH_c concentration of 20 ppm. The site map in Figure 1 outlines the general area of the "site soils". Table 1 lists the soil cleanup standards for the CPLA.

TABLE 1
SOIL/WASTE CLEANUP STANDARDS

Contaminant	Cleanup Standard (Site Soils)	Cleanup Standard (Lagoons)
Arsenic	0.56 ppm	
Benzo(a)pyrene	Total of four must be less than 0.97 ppm	Total of four must be less than 0.97 ppm or the alternative wetland standard of less than 100 ppm
Dibenz(a,h)anthracene		
Benz(a)anthracene		
Chrysene		

The cleanup standard for soil contamination listed in the CPLA ROD states that the sum total of four carcinogenic polynuclear aromatic hydrocarbons (PAH_c) must be less than 0.97 parts per million (ppm). The four PAH_c are benzo(a)pyrene, dibenz(a,h)anthracene, benz(a)anthracene, and chrysene. The area located within the five lagoons also has an alternative cleanup standard of 100 ppm for the four PAH_c if the bioremediation cannot achieve the 0.97 ppm in a timely manner.

Alternatives to address the "site soils" are addressed below:

Alternative 1 - Excavate and store the "site soils" on the AlliedSignal property for eventual treatment or placement into the lagoon area.

As referenced in Table 1, two cleanup standards exist for the four PAH_c in the soil/waste located in the lagoon area. The two cleanup standards for PAH_c are applicable to the bioremediation. If the bioremediation cannot achieve the 0.97 ppm cleanup standard in a

timely manner, but can meet the 100 ppm alternate cleanup standard, then the lagoons will be flooded with waters from Ice Creek and turned into a wetland ecosystem. The "site soils" contain PAH_c in the range of 20 ppm; therefore, treatment of the "site soils" will be required if the 0.97 ppm cleanup standard can be achieved. If the alternate cleanup standard of 100 ppm is applied, the "site soils" will be placed into the lagoons and further treatment will not be required. Approximately 5000 cubic yards of "site soils" contain PAH_c greater than 100 ppm. These soils will be disposed of off-site or treated in a to be determined manner.

The "site soils" will be excavated and stored on-site until lagoon 5 is excavated during the incineration phase. A portion of the "site soils" will be placed into the lagoon 5 area after excavation is complete and remaining "site soils" will be eventually placed into the lagoon area. If the alternative cleanup standard of 100 ppm is chosen, AlliedSignal must submit a wetland ecosystem plan to ensure that a wetland is developed. The cost of this alternative is $2.9 million.

Alternative 2 - Excavate and dispose of the 135,000 cubic yards of "site soils" in an off-site landfill.

The average concentration of the "site soils" is approximately 20 ppm for PAH_c and preliminary results indicate that the "site soils" would pass the toxicity characteristic leaching procedure (TCLP) test and could be disposed of in an off-site Subtitle D landfill. The concentration of the four PAH_c after excavation would be under one part per million. The cost of this alternative is $6.8 million.

Alternative 3 - Excavate and treat the 135,000 cubic yards of "site soils" in the on-site incinerator.

The 135,000 cubic yards of "site soils" will be blended with the 30,000 cubic yards coal/coke fines and 122,000 cubic yards of lagoon 5 waste which includes the K087 listed waste. The additional 135,000 cubic yards of material will extend the incineration from three years to six years and add $47 million to the incineration cost.

Alternative 4 - Excavate and treat the 135,000 cubic yards of "site soils" by bioremediation.

This alternative would use bioremediation to treat the "site soils". The "site soils" would be placed into the lagoons immediately and treated through in-situ bioremediation. The "site soils" will be treated to meet the 0.97 parts per million cleanup standard. Dependent upon the performance of the bioremediation, the 0.97 ppm standard may not be possible due to the limitations of the bioremediation. The timeframe to complete the bioremediation is approximately 30 years and the additional "site soils" would not affect the 30 year timeframe. The cost of the additional bioremediation including operation and maintenance would be $17 million.

Fundamental Change 3 - Comparative Analysis of Alternatives

A discussion on the comparison of the four alternatives to address the newly discovered "site soils" is discussed below. The best balance of the nine criteria is implementing Alternative 1, which is excavate and store the "site soils" on the AlliedSignal property for eventual treatment or placement into the lagoon area.

Criteria 1 (overall protection human health & environment) is met by the four alternatives. Protection is achieved by eliminating, reducing or controlling risks through treatment or engineering controls.

Criteria 2 (compliance with ARARs) is required pursuant to Section 121(d) and no additional ARARS as described in the original ROD would apply for the four alternatives.

Criteria 3 (long-term effectiveness and permanence) is best achieved through alternative 3 (incineration) and alternative 4 (bioremediation). Alternative 2 (disposal in off-site landfill) and Alternative 1 (placement into lagoons) also meet the criteria but not through treatment. Alternative 1 will use treatment through bioremediation if the 0.97 ppm cleanup standard can be achieved. If the bioremediation cannot achieve the 0.97 ppm standard, then the direct contact risk will be eliminated through flooding of the lagoons and the eventual wetland environment.

Criteria 4 (reduction in toxicity, mobility, or volume through treatment) is best met through Alternative 3 and Alternative 4 due to treatment by incineration and bioremediation. Alternative 1 partially meets the criteria if the bioremediation can reach the 0.97 ppm cleanup standard. Alternative 2 removes the "site soils" to an off-site landfill; therefore, treatment is not a component.

Criteria 5 (short-term effectiveness) is met by the four alternatives. Excavation of the "site soils" will not produce air impacts due to the low concentration of constituents present in the soil. Storage of the "site soils" as described in Alternative 1 will not produce air impacts and fugitive dust will be prevented through the use of engineering controls.

Criteria 6 (implementability) is fully met by Alternative 1,2 and 3 with Alternative 4 partially meeting the criteria. If bioremediation of the "site soils" is started immediately, movement of the "site soils" in the lagoon area will be difficult due the volume of material. In addition, the bioremediation may not be able to achieve the 0.97 ppm cleanup standard.

Criteria 7 (cost) varies widely for the four Alternatives. Alternative 1 is the least expensive at $2.9 million. If the bioremediation can achieve the 0.97 cleanup standard, the cost will rise significantly. Off-site disposal in a Subtitle D landfill is $6.8 million and the most expensive alternative is incineration at $47 million. Bioremediation of the "site soils" will be approximately $17 million.

Criteria 8 (support agency comments) has been determined and the Ohio EPA supports Alternative 1.

Criteria 9 (community acceptance) will be addressed in the attached Responsiveness Summary. No public comments were received.

FUNDAMENTAL CHANGE 4

Alternative 1 - Revise the cleanup standard for the groundwater constituents benzo(a)pyrene and dibenz(a,h)anthracene at the GDA and CPLA from a total of 5 parts per trillion (ppt) to the new safe drinking water standards of 200 ppt for benzo(a)pyrene and 300 ppt for dibenz(a,h)anthracene.

The original ROD calculated a cleanup standard for benzo(a)pyrene and dibenz(a,h)anthracene of 5 parts per trillion total for both compounds. The 5 ppt cleanup standard was calculated through a risk assessment since drinking water standards had not been developed at that time. Drinking water standards called Maximum Contaminant Levels (MCLs) for benzo(a)pyrene and dibenz(a,h)anthracene have now been developed through the Safe Drinking Water Act. The MCL is U.S. EPA's maximum permissible level of a contaminant in drinking water delivered to the public. These levels are based upon several factors, including health effects and technology available to remove contaminants from drinking water. The MCLs for benzo(a)pyrene and dibenz(a,h)anthracene are 200 parts per trillion and 300 parts per trillion respectively. Nonaqueous phase substances (NAPS) are present at the GDA, under and outside of the waste pit. As described in the original ROD for the GDA, the groundwater compliance boundary is the edge of the GDA waste pit, just outside the containment system. This ROD Amendment does not change the intent of the original ROD which is to contain the GDA source area through the use of a slurry wall, multi-media cap, and installation of two wells inside the waste pit to maintain an inward gradient.

As referenced in the original GDA ROD, it may not be technically feasible to achieve the groundwater cleanup standards for the contaminated groundwater outside of the GDA due to the presence of high levels of benzene and NAPS. The Agency will continue to evaluate the data from the groundwater extraction and treatment system and will reevaluate the cleanup standards every five years to determine if it is technically practicable to remediate the NAPS.

To ensure that all constituents present in the groundwater are within U.S. EPA's acceptable risk range, AlliedSignal must demonstrate that the groundwater is within the allowable risk range prior to turning off the groundwater pump and treatment system. Table 2 is a list of the groundwater cleanup standards.

TABLE 2 GROUNDWATER CLEANUP STANDARDS		
Contaminant	Cleanup Standard (Original ROD)	Cleanup Standard (ROD Amendment)
Benzo(a)pyrene	Total of two must be less than 5 ppt	200 ppt
Dibenz(a,h)anthracene		300 ppt
Arsenic	50 ppb	No Change
Ammonia	30 ppm	No Change
Phenolics	4 ppm	No Change
Benzene	5 ppb	No Change
Naphthalene	300 ppb	No Change
Nitrate	10 ppm	No Change
Total Cyanide	200 ppb	No Change
ppt - parts per trillion ppb - parts per billion ppm - parts per million		

Alternative 2 - No Action (Retain the original ROD cleanup standard for benzo(a)pyrene and dibenz(a,h)anthracene of 5 parts per trillion for both constituents.

In this alternative, the cleanup standard for benzo(a)pyrene and dibenz(a,h)anthracene will remain at 5 ppt total for both compounds.

Fundamental Change 4 - Comparative Analysis of Alternatives

In comparing Alternative 1 and Alternative 2, the best balance of the nine criteria would be Alternative 1. Alternative 1 and Alternative 2 are equivalent for Criteria 2, 3, 5, and 6. Alternative 2 would be slightly more protective of human health and the environment (Criterion 1), though both alternatives reduce the risk range to levels EPA deems protective of human health and the environment. Alternative 2 would be slightly more effective in meeting Criteria 4, but the cost of Alternative 1 will be as much as $4.1 million less expensive. The Ohio EPA supports Alternative 1. No public comments were received concerning this change.

IV. STATUTORY DETERMINATION

The four fundamental changes to the original RODs meet the statutory requirements of CERCLA Section 121. The selected changes to the original RODs are protective of human health and the environment, attain ARARs, are cost effective, utilize permanent solutions and alternative treatment technologies to the maximum extent practicable, and use treatment that

reduces the toxicity, mobility, or volume of contaminants as a principal element.

The following is a summary of how the fundamental changes meet each of the five requirements.

Protection of Public Health and the Environment

The four fundamental changes to the original ROD will not affect the intent of the original ROD. Removing the waste heat boiler and incinerator dismantlement provision have no bearing on protection of public health and the environment. If the bioremediation can meet the 0.97 ppm PAH_c cleanup standard, then the treated "site soils" will be at a 1×10^{-6} risk level for direct ingestion. If the bioremediation cannot reach the 0.97 ppm PAH_c cleanup standard for PAH_c will not affect public health or the environment since the lagoons will be flooded and the direct contact risk will be eliminated. Currently, the lagoons are supporting a wetland environment and the addition of the "site soils" into the lagoon will not affect the wetland environment.

The change in the groundwater cleanup standard for benzo(a)pyrene and dibenz(a,h)anthracene to Safe Drinking Water MCL values does not adversely affect public health and the environment since the groundwater will be required to be within the cumulative risk range of 1×10^{-4} to 1×10^{-6} for carcinogenic compounds prior to discontinuing the groundwater pump and treatment system.

Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

The selected remedy and the four fundamental changes described in this ROD Amendment meet all applicable or relevant and appropriate requirements (ARARs) of Federal and State statutes pursuant to CERCLA Section 121 (d)(1), except where waivers of Federal or State law are necessary. The four fundamental changes will not require waivers of Federal or State statutes.

Removal of the waste heat boiler does affect the Prevention of Significant Deterioration (PSD) status as described in the Clean Air Act. It has been determined that PSD would apply to the incineration if steam is supplied to the tar plant from the incineration of the CERCLA waste. Since the waste heat boiler will be removed and steam will not be supplied to the tar plant, the PSD regulations will not apply to the incineration. The removal of the waste heat boiler also affects the incinerator ash since waste fuel recovery will not be used; therefore, the ash must be delisted for the K087 waste instead of using the exemption as described in 40 CFR Part 261.

Implementation of fundamental change 2, 3 and 4 will meet the ARARs as described in the original ROD and are not affected by new ARARs.

Cost-Effectiveness

The four fundamental changes taken as a whole will save approximately $4 million on the cost of the total site remedy which could be as high as $190 million over the life of the entire project. Removal of the waste heat boiler will save $3 million due to a reduction in capital cost and operation and maintenance during the life of the incineration. The "site soils" were newly discovered contamination which has added additional cost to the CPLA remedy. While the total additional cost is difficult to estimate, it could exceed $3 million. A cost-effective solution will be implemented in conjunction with the other CPLA remedy components. The change in the cleanup standards to the MCLs for benz(a)pyrene and dibenz(a,h)anthracene will save approximately $4.1 million since the groundwater pump and treatment system will not have to operate until the former 5 ppt cleanup standard is reached.

Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

The four fundamental changes to the original remedy represent to the maximum extent possible, the use of permanent solutions and alternative treatment technologies to the site remedy. Although removal of the waste heat boiler eliminates waste fuel recovery, the cleanup will proceed faster and in a more cost effective manner. Incineration and bioremediation will apply to a minimum of 650,000 cubic yards of waste material and may reach 738,000 cubic yards if the "site soils" undergo remediation.

Preference for Treatment as a Principal Element

The statutory preference for treatment remains satisfied by the four fundamental changes. The "site soils" will be treated by bioremediation if the 0.97 ppm cleanup standard can be achieved and if the standard is not achievable, the "site soils" will be managed in a way that continues to protect public health and the environment.

RESPONSIVENESS SUMMARY

A Proposed Plan was issued to the public on March 6, 1995 along with a fact sheet. A thirty day public comment period was held until April 4, 1995. A public meeting on March 30, 1995 was used to explain in detail the four proposed changes to the original ROD and accept public comments. At the end of the public comment period, the Agency did not receive any public comments.

ADMINISTRATIVE RECORD UPDATE

Pages	Date	Title	Author	Recipient
100+	11/93	Preliminary Design Report - Volume 1 & 2 Groundwater/Facilities Engineering	IT Corporation	U.S. EPA
100+	11/93	Preliminary Design Report - Volume 1 & 2 Bioremediation - CPLA	IT Corporation	U.S. EPA
100+	5/94	Intermediate Design Report - Volume 1 & 2 Groundwater & Bioremediation - CPLA	IT Corporation	U.S. EPA
8	3/95	Proposed Plan Amendment	U.S. EPA	Public
7	12/94	Project Report by AlliedSignal	AlliedSignal	U.S. EPA
11	8/94	Meeting Notes for August 11 & 12 1994 Project Meeting	IT Corporation	U.S. EPA
8	2/95	Meeting Notes for Februry 2, 1995	IT Corporation	U.S. EPA
25+	9/94	Draft Isopleth Maps	IT Corporation	U.S. EPA
9	9/94	Site Soils Investigation Data Draft Report	IT Corporation	U.S. EPA
7	9/94	Estimation of Areas and Quantities of Site Soils	IT Corporation	U.S. EPA
2	10/94	Site Soil Options	AlliedSignal	U.S. EPA
24	10/94	Reevaluation of the Site Soils Cleanup Goals	IT Corporation	U.S. EPA
21	12/94	Costs for Handling Site Soils	IT Corporation	U.S. EPA
15	12/94	Site Soils Handling Approach	IT Corporation	U.S. EPA

25	2/95	Revised Site Soils & ROD Soils Delineation Plan	IT Corporation	U.S. EPA
11	5/94	Drinking Water Regulations and Health Advisories	U.S. EPA	Public
100+	1/94 to 1/95	CPLA Monthly Project Status Reports	AlliedSignal	U.S. EPA
1	March 5, 1995	Ironton Tribune Newspaper Ad	U.S. EPA	

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George V. Voinovich
Governor

August 2, 1995

RECEIVED
AUG 4 1995
U.S. EPA REGION 5
OFFICE OF ...

Valdus V. Adamkus
Regional Administrator
U.S. EPA, Region V
77 West Jackson Avenue
Chicago, Il 60604

Dear Mr. Adamkus:

The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the final Amendment to the Records of Decision (ROD) for the Allied Chemical/Ironton Coke Superfund site in Lawrence County, Ohio. This ROD Amendment includes changes to both the 1988 ROD for the Gold Camp Disposal Area (GDA) operable unit and the 1991 ROD for the Coke Plant Lagoon Area (CPLA) operable unit at this site.

This ROD Amendment is comprised of four fundamental changes to the original remedy for this site. These changes are the following:

* Removal of the waste heat boiler from the CPLA incineration process, thereby eliminating the production of steam for the AlliedSignal Tar Plant (waste fuel recovery). Since this change eliminates the RCRA recycling exemption for the incinerator ash, AlliedSignal must manage this ash as hazardous waste or USEPA must delist so that it can be disposed of as solid waste.

* Removal of the ROD dismantlement provision for the CPLA incinerator. This change was necessary since it was determined the Agencies did not have the legal authority to require dismantlement of this unit. However, before AlliedSignal can operate the incinerator after completion of this remedial action they are required to obtain all applicable permits from Ohio EPA.

* Excavation and storage of approximately 135,000 cubic yards of recently identified CPLA contaminated "site soils" for eventual treatment and/or placement into the lagoon area.

* Revision of the CPLA and GDA clean-up standard for the groundwater constituents benzo(a)pyrene and dibenzo(a,h)anthracene from a total of 5 parts per trillion(ppt) to the new safe drinking water standards (MCL) of 200 ppt for benzo(a)pyrene and 300 ppt for dibenzo(a,h)anthracene.

These changes represent a net cost savings to AlliedSignal of approximately $4 million dollars.

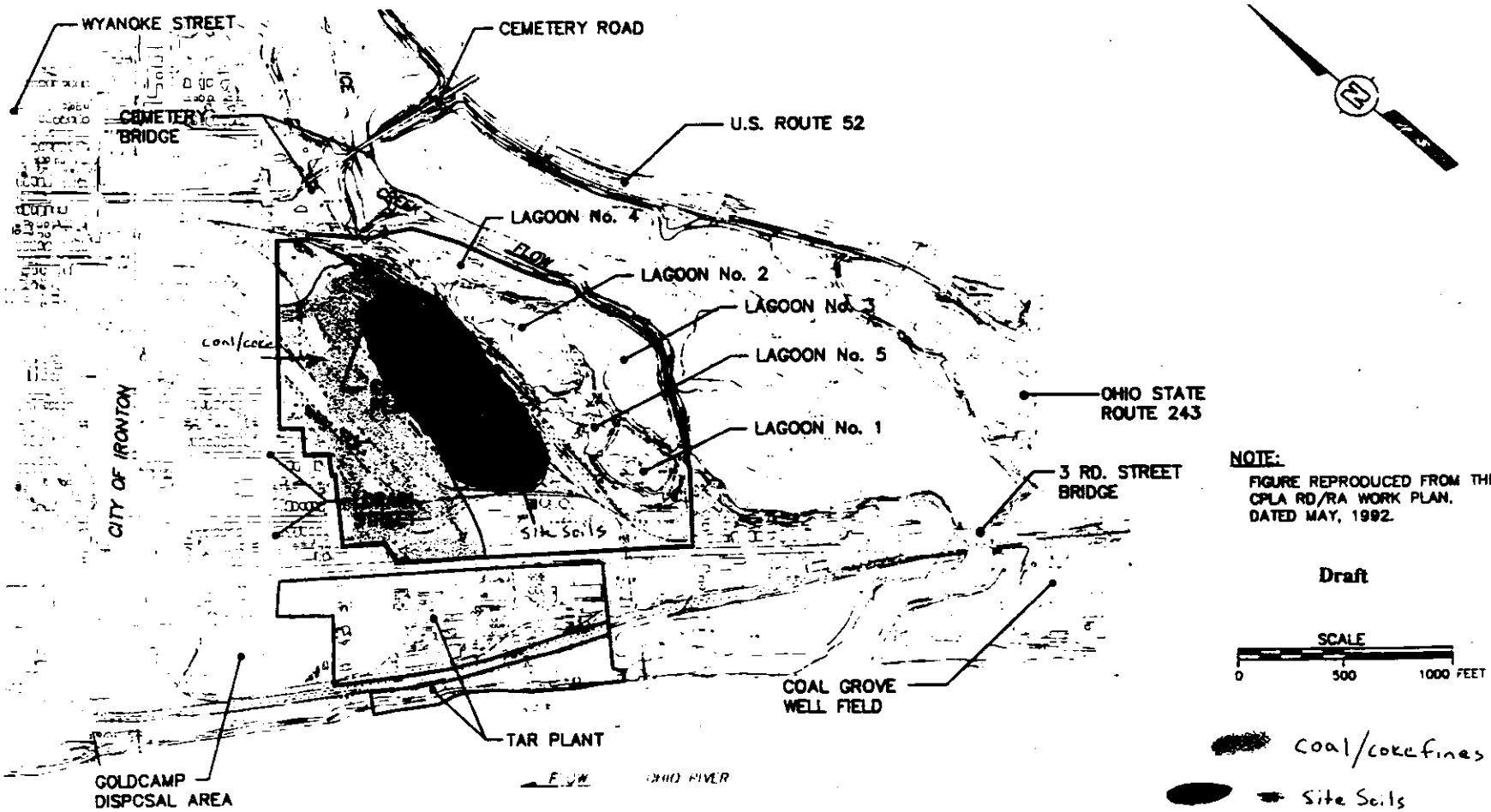
The Ohio EPA believes these changes both are protective of human health and the environment and provide a reasonable approach to control costs on what has become one of the most expensive clean-ups in the State of Ohio. Therefore, Ohio EPA concurs with this ROD Amendment.

Sincerely,

Donald R. Schregardus, Director
Ohio Environmental Protection Agency

DRS/KGG/mr

cc: Jan Carlson, Chief, DERR
Ray Beaumier, Section Manager, DERR
Kay Gilmer Gossett, DERR, SEDO
Catherine Stroup, Legal, CO
Thomas Alcamo, USEPA, Region V
John Kuhns, USEPA, Region V



NOTE:
FIGURE REPRODUCED FROM THE CPLA RD/RA WORK PLAN, DATED MAY, 1992.

Draft

SCALE
0 500 1000 FEET

REFERENCE:
1. TOPOGRAPHIC MAP PREPARED BY EASTERN MAPPING CO. PITTSBURGH, PA DECEMBER 1983, SCALE: 1"=200'
2. ORIGINAL DWG. NO 83-1625-B54 USED IN RI REPORT, DATED JULY 1986.

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