

ARKANSAS POLLUTION CONTROL  
AND ECOLOGY COMMISSION

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Gum Springs and Hurricane Creek

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The Arkansas Pollution Control and Ecology Commission ("Commission") at the October 24, 1997 Commission Meeting passed Minute Order No. 97-49 that established a Special Committee ("Committee") to investigate the Reynolds Metals Company ("Reynolds") Facility at Gum Springs, Arkansas and disposal sites at Hurricane Creek in Saline County. The purpose of the Committee was to investigate all aspects of receiving, storage, treatment, and disposal of spent potliner ("SPL") by Reynolds during the life of this operation. The Committee also considered other issues raised by the public, Reynolds, Arkansas Department of Pollution Control and Ecology ("Department"), Northwest Producers, Sierra Club, and the Commissioners.

The Committee's investigation received numerous submissions from Reynolds, the Department, and other sources and conducted several meetings to hear presentations concerning issues by the entities, and to discuss the circumstances.

FINDINGS

Reynolds owns and operates a facility in Gum Springs, Clark County, Arkansas, which treats SPL. SPL is a listed hazardous waste, K088, under state and federal law. Reynolds has applied for a hazardous waste permit for its Gum Springs Treatment Facility. Both Part A and Part B of the application have been submitted to the Department. Final action on the permit application is pending.

The Gum Springs facility includes a landfill which currently receives treated SPL residue generated by the Reynolds Gum Springs Treatment Facility. The treated SPL residue is derived from a listed hazardous waste (SPL) and must be managed as a hazardous waste under federal and state law. The landfill was originally permitted as a non-commercial solid waste disposal facility. At the time of the solid waste disposal facility permitting, and until recently, the treated SPL residue generated by the Reynolds treatment process at Gum Springs was not regulated as a hazardous waste because it had been delisted by the Environmental Protection Agency ("EPA") and the state. See 56 Fed. Reg. 67197. On September 3, 1997, EPA issued an administrative order which required treated SPL residue of Reynolds to be managed as a

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hazardous waste. See EPA Region VI Unilateral Administrative Order issued on September 3, 1997, and amended on September 30, 1997, In The Matter of Reynolds Metals Company, Docket No. VI-7003-97-06. On December 1, 1997, EPA revoked the delisting of the treated SPL residue generated by the Gum Springs treatment process. See 62 Fed. Reg. 63458. The Commission similarly relisted the treated SPL residue generated by the Gum Springs treatment process as a hazardous waste. See Minute Order No. 98-05, Arkansas Pollution Control and Ecology Commission (January 23, 1998).

The EPA relisting (delisting revocation) occurred because Reynolds treatment process of SPL had failed to produce the results predicted by tests and models of EPA. The Toxicity Characteristic Leaching Procedure ("TCLP") test and model required by EPA in the delisting process was not appropriately applied by EPA and was the primary factor used in delisting the treated SPL residue. The Commission believes that the solution to proper disposal and management of SPL is development of a process that renders SPL non-hazardous after treatment or the production of an environmentally safe commercial product.

The Commission senses that violations may have occurred over the life of this facility which have compounded the problems.

Cell #1 at the Gum Springs facility was designed, permitted, and operated as a solid waste landfill. At the time the treated SPL residue was placed in Cell #1 it was delisted by EPA and the state and considered to be non-hazardous. By law the waste in Cell #1 is a delisted waste, but in reality it is a hazardous waste (the same as the waste in Cell #2) disposed in a solid waste designed landfill.

Cell #2 is currently operating with an engineering design and liners as required for a hazardous waste landfill.

Reynolds is having a leachate liner compatibility study conducted on the liners used at Gum Springs. TRI/Environmental, Inc. is conducting the ongoing geosynthetic chemical compatibility studies via EPA Method 9090A on the geomembrane. Interim reports

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are due at 30, 60, and 90 day intervals with a final report due in 120 days. The first and second reports have been received, with the next report due March 15, 1998. The final report should be complete by April 15, 1998.

Reynolds used treated SPL residue as a fill material at the E-40 Pit at Hurricane Creek in Saline County. The E-40 Pit is a bauxite mine reclamation project and is permitted under Surface Mining and Reclamation Division Open-Cut Land Reclamation Permit Numbers 35 and 106. The treated SPL residue was also used to construct several roads on the Hurricane Creek site. The material on the exposed roads has been removed and placed in the E-40 pit. Roads in the pit that had treated SPL residue on them have been covered. A geotextile material was placed on the floor of the E-40 pit prior to putting in the treated SPL residue. It has not been confirmed if it covers the entire pit floor.

The following activities are scheduled to take place to evaluate the site at the E-40 pit. A Geotechnical and Hydrological Site Investigation ("SI") should be completed by April 15, 1998. A SI report and revised Groundwater Monitoring Plan are scheduled for completion by April 30, 1998. An Environmental Impact Study is scheduled for completion on June 12, 1998.

The transporting of treated SPL residue to the Hurricane Creek site, the use of treated SPL residue in the E-40 pit as a fill material, and the use of treated SPL residue as a road base was done without the approval of the Department or EPA. The treated SPL residue that was exposed on roads has been removed and put in the E-40 Pit. The roads in the E-40 Pit that had treated SPL residue on them have been covered, but the treated SPL residue remains in place on them. Roads in the demolition landfill that had treated SPL residue on them were also covered in place.

The Reynolds R&D landfill at Hurricane Creek has treated SPL residue in it. Three monitoring wells were installed during closure of the landfill, but are no longer in operation. EPA Region VI Unilateral Administrative Order issued on September 3, 1997, and amended on September 30, 1997, In The Matter of Reynolds

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Metals Company, Docket No. VI-7003-97-06 has been amended to cover Reynolds Class 4 demolition landfill.

ORDER

A. In light of the foregoing facts and the information developed during the investigation the Commission recommends the Director of the Arkansas Department of Pollution Control and Ecology and Reynolds enter into a Consent Administrative Order ("CAO") containing the following conditions.

1. Expedited Permitting.

a. Within four months of the date of this Order, Reynolds shall submit to the Department a Part B hazardous waste permit application covering the landfill portion of the Gum Springs facility. A Part B submittal will meet the expedited permitting requirement. If Reynolds fails to submit a Part B application by the specified deadline, Reynolds shall not place any additional treated SPL residue into the landfill until a permit is issued for the landfill portion of the facility.

b. Within eight months of the submittal of Part B of the application or one year from the date of this Order, the Department will issue a draft permit decision on the application for the landfill. If the twelve-month period expires with no decision (approval or denial), Reynolds and the Department shall appear before the Commission at the next regularly scheduled meeting of the Commission to explain why a decision has not been reached and/or to request an extension. An extension must be requested and granted or Reynolds shall not place any additional treated SPL residue in the landfill. The Commission believes in the absence of exceptional circumstances, the twelve-month permit period shall not be extended unless the parties demonstrate that they have reasonably complied with their obligation to expedite submission and processing of the permit application for the landfill portion of the facility. The Commission will determine if additional time for permitting is justified.

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c. If the landfill is closed because no draft permit decision was made at the end of twelve months and an extension was not requested and granted, Reynolds may continue to process the SPL in the Gum Springs Treatment Facility but shall not place any additional treated SPL residue in the landfill or have temporary or permanent storage of treated SPL residue on-site. Reynolds may proceed with the permit process on the landfill if it desires, but a plan to secure the landfill will be developed by Reynolds subject to approval by the Department. If Reynolds does not desire to proceed with the permit process of the landfill, a closure plan will be developed by Reynolds subject to approval by the Department.

d. If Reynolds permitting process on the landfill and processing of SPL at the treatment facility are both terminated, then the Department will initiate closure of the Gum Springs Treatment Facility and Landfill.

2. Reconfiguration of the landfill and design of the monitoring system.

a. Within 30 days of the date of this Order Reynolds shall submit to the Department a plan for revising the configuration of the landfill portion of the Gum Springs facility. The plan shall include a reconfiguration that eliminates any overlap of the waste in Cell #2 on top of waste in Cell #1. Cell #1 closure plan shall meet or exceed the closure requirements for a hazardous waste landfill.

b. A groundwater-monitoring-well system shall be designed and implemented by Reynolds to monitor all formations from the surface formation to and including the Nacatoch Sand. Sampling will occur monthly and results will be reported by Reynolds to the Department on a monthly basis and reported to the Commission on a quarterly basis until a permit is issued or denied on the landfill. The under drain from Cell #1 and the under drain from the remaining cells shall drain into separate collection systems. Reports on the leachate from all cells will be reported by Reynolds to the Department on a monthly basis and reported to the Commission on a quarterly basis until a permit is issued or denied on the landfill.

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c. The plans submitted pursuant to paragraph A.2.(a) and (b) of this Order shall be subject to review and approval by the Department. The Department shall exercise its best efforts to provide expedited review of the plan. The Department shall coordinate its review with appropriate representatives of EPA Region VI to avoid any conflict with the requirements that may arise under the Unilateral Administrative Order issued by EPA on September 3, 1997, and amended on September 30, 1997. In The Matter of Reynolds Metals Company, Docket No. VI-7003-97-06 (EPA Region VI).

d. In order to allow orderly implementation of the landfill reconfiguration in compliance with the requirements of this Order, Reynolds shall be allowed to increase, on a temporary basis, the on-site storage of untreated SPL from a maximum of 252 containers to a maximum of 500 containers. Such storage shall be allowed only in closed containers which meet applicable requirements for hazardous waste storage. This temporary increase in storage capacity shall expire twelve months from the date of this Order. Reynolds must demonstrate financial responsibility for the increased storage capacity.

e. Upon the Department's approval of this plan submitted pursuant to Paragraph A.2.(a) and (b) of this Order, Reynolds shall immediately implement the plan.

3. Reynolds must agree to the development of a process that renders SPL non-hazardous after treatment and will report their progress to the Commission every six months.

4. Reynolds agrees that during the pendency of the Gum Springs Landfill permit application Reynolds will not sue the Northwest Producers to force them to send their SPL to the Gum Springs Facility for treatment and disposal.

5. Reynolds agrees to require Genesis Environmental Consulting, Inc. to provide directly to all Commissioners a bi-monthly status report on the Part B application of the Gum Springs

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Hazardous Waste Landfill. The report will include a description of the work conducted during the reporting period and a recitation of the significant findings and conditions of the site and whether or not those findings and conditions comply with RCRA requirements.

B. The Commission recommends that the Director take the following actions concerning the Gum Springs Facility and the Hurricane Creek area:

1. The Department staff should review decisions and actions taken by Reynolds in receiving, storing, treating, using, and disposing of SPL and treated SPL residue. They should determine if violations occurred and proceed with proper enforcement actions. The Director is instructed to report to the Commission the violations and enforcement actions. This review should include: the changing from brown sand to red sand in the treatment process; the disposal of the treated SPL residue after the treatment change was made; hauling treated SPL residue off site to the reclamation project at Hurricane Creek; and the treatment and disposal of waste water and leachate from the landfill.

2. The Department staff shall be directed to review on a regular basis the leachate data, treatment data, and other data available which signals potential problems in a treatment process. It is hard to envision that the treatment process of SPL failed for such a long time and that review procedures didn't detect a problem. Results of the EPA's TCLP model didn't predict what actually happened in the real world situation. The Department should require alternative data from the landfill leachate in addition to data developed from models in the evaluation process for delisting a substance. The ongoing success of a treatment process should be reevaluated on a regular basis.

3. The Commission recommends that the Director determine whether violations occurred in transporting the treated SPL residue away from Gum Springs Treatment Facility to the Hurricane Creek site for use as a fill material in the E-40 Pit and in the construction of roads. Appropriate enforcement action should be taken on all violations. The Director is instructed to report to the Commission on the findings.

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4. The Commission also recommends that the Director not release the \$2,259,150 reclamation bond held by the Mining Division on the two SMRD Open-cut Land Reclamation Permit Numbers 35 and 106 until all environmental concerns are resolved.

5. The Commission recommends the Director require Reynolds confirm the removal of the treated SPL residue from the exposed roads at Hurricane Creek, delineate all locations where it was placed, make an environmental assessment of the affected areas, and report the findings to the Commission.

6. The Commission recommends the Director require Reynolds to conduct a Geotechnical and Hydrological Site Investigation, prepare a groundwater monitoring plan, and conduct an Environmental Impact Assessment of the R & D landfill similar to what is being done on the E-40 Pit. These reports should be completed within one year of the date of this Order and directed to the Commission.

7. The Department should coordinate the investigations at Hurricane Creek with EPA to avoid any duplication of effort.

C. The Commission will take the following actions to resolve some of the issues investigated, to improve procedures and regulations, and eliminate this from ever happening again.

1. The Commission will send letters to the EPA Administrator and EPA Region 6 Regional Administrator expressing the Commission's dissatisfaction of the delisting procedure used by EPA that failed to properly evaluate hazardous material for delisting and that EPA staff refused to consider other leachate data available from the landfill.

2. The Commission will send to the Regulations Committee or the Legislative Committee the following items for study to determine if changes in the regulations and law are necessary to provide a better understanding of the permitting definitions:



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- a. Existing Facility Designation
- b. Interim Status
- c. Non-Commercial and Commercial designations on Solid Waste Landfills and Hazardous Waste Landfills.

3. The Commission will send a letter to the Director expressing the concern of the Commission in the following:

- a. Time involved in issuing permits.
- b. Failure of the staff to recognize from available data that the treatment of the SPL was not working.

4. The Commission will send a letter to Reynolds expressing the concern of the Commission that Reynolds continued to treat SPL and dispose of the treated SPL residue in a solid waste landfill under the delisting when they had data available that should have signaled a problem.

SO ORDERED.

COMMISSIONERS

<u>WMB</u>	B. Bush
<u>JCC</u>	C. Coleman
<u>DH</u>	D. Hanby
<u>JH</u>	J. Hill
<u>JM</u>	J. Mobley
<u>JP</u>	J. Pascale

<u>TS</u>	T. Schueck
<u>JS</u>	J. Shannon
<u>HW</u>	H. Watkins
<u>RW</u>	R. Wilbourn
<u>W</u>	W. Wright
<u>RY</u>	R. Young
<u>SY</u>	S. Yaich

Julia P. Mabley  
Chair

SUBMITTED BY: Bill Bush PASSED: 03/27/98