U.S. Environmental Protection Agency
Proposed Plan
for
Gould Superfund Site
Portland, Oregon

August 2000

This Proposed Plan is issued by the US Environmental Protection Agency (EPA), the lead agency for site activities, and the Oregon Department of Environmental Quality (DEQ), the support agency. EPA, in consultation with DEQ, will select a final remedy for the site after reviewing and considering all information submitted during the 30-day public comment period. EPA, in consultation with DEQ, may modify the proposal based on new information and public comment.

EPA is issuing this document as part of its public participation responsibilities under Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This Proposed Plan summarizes information that can be found in greater detail in the documents contained in the Administrative Record file for this site. EPA and DEQ encourage the public to review these documents to gain a more comprehensive understanding of the site and Superfund activities that have been conducted at the site.

Public Comments Are Due September 8, 2000

This Proposed Plan describes EPA's recommendation that no action is necessary for the Groundwater Operable Unit at the Gould Superfund Site in Portland, Oregon. Gould Battery, a former lead smelter and battery recycling facility, was added to EPA's National Priorities List (NPL) in 1983 because of documented lead contamination. Cleanup of the Soils Operable Unit began in 1993 and is expected to be completed by end of August 2000. The work is being performed by cleanup contractors hired by the Gould Site Potentially Responsible Parties (PRPs).

EPA has determined that the cleanup actions and exposure controls and monitoring required by the 1997 Record of Decision (ROD) Amendment have addressed current and potential threats to human health or the environment from contaminants associated with the former lead smelter and battery recycle operations. Groundwater monitoring carried out as part of the cleanup of the Soils Operable Unit has not shown a need for additional cleanup of Gould Site contaminants in groundwater. Groundwater monitoring will continue at the site as required by the 1997 ROD Amendment for the Soils Operable Unit to ensure that the remedy remains protective.

Public Comment Opportunity

EPA encourages public input on the Proposed Plan to make sure that the remedy meets statutory requirements and addresses community concerns. The information on which this proposal is based is available in the Administrative Record file located at the Information Repositories listed at the end of this document, and should be consulted for details on the development and evaluation of this recommendation.

Public input on this proposal is important to the cleanup remedy selection process. Based on new information or public comment, EPA may modify the proposed remedy. The public is encouraged to review and comment on this proposal.

Public Comment Period: EPA will accept written comments on the Proposed Plan during a public comment period from August 10, 2000 to September 8, 2000. Comments should be addressed to:

Chip Humphrey
EPA, Oregon Operations Office
811 SW Sixth Avenue
Portland, Oregon 97201
(503) 326-2678

Public Meeting Opportunity: EPA will provide the opportunity for a public meeting to discuss and receive comments on the Proposed Plan, if there is sufficient community interest. If you are interested in a meeting, call or write to Chip Humphrey (see above) by August 18, 2000.

To ensure effective communication with everyone, additional services can be made available to persons with disabilities by contacting EPA.

Site Description and History

The Gould Superfund Site is located between NW St. Helen's Road and NW Front Avenue in a heavily industrialized area northwest of downtown Portland known as the Doane Lake area. (See Figure 1.) The site includes a 9.2 acre property currently owned by Gould Inc. that was the location of the former secondary lead smelter and battery recycle facility and areas outside the property boundary where battery casings and other residues from operations on the Gould property were placed.

The site is located on fill that was placed in the flood plain of the Willamette River. The fill overlies alluvial deposits, which in turn overlies the Columbia River Basalt. The fill, which was deposited beginning in the 1930s until the early 1980s, consisted of diverse materials such as dredge spoils, demolition debris, rock quarry spoils, smelter slag and matte, and shredded battery casings. The fill thickness varies from approximately 1 foot to over 32 feet.

Secondary lead smelting operations began at the site in 1949 under the ownership of Morris P. Kirk and Sons, a subsidiary of NL Industries, Inc. (NL). Facility operations included lead-acid

battery recycling, lead smelting and refining, and lead oxide production. Gould purchased the property in 1979 and closed the facility in 1981. During facility operations, discarded battery casing materials and other lead smelter wastes were used as fill on the Gould Site and an adjacent property. Acid from batteries was drained to Doane Lake during several years of operation.

In 1981 and 1982, a joint investigation of contamination at the site was conducted by EPA and the Oregon Department of Environmental Quality (DEQ). EPA included the site on the NPL in 1983 because of documented lead contamination. In 1985 NL and Gould signed an Order on Consent with EPA under which the two companies conducted a Remedial Investigation/ Feasibility Study (RI/FS). The RI/FS was completed in February 1988. The RI/FS showed there were high levels of lead contamination in soil, waste and debris and in East Doane Lake sediments at the site.

In March 1988, EPA issued a ROD for the Soils Operable Unit that detailed the actions deemed necessary to clean up the contamination. The selected remedy involved removing and recycling lead from battery casings; fixation of contaminated soil; and monitoring air, ground water and surface water quality.

Public involvement activities for the site began in the early 1980s. From 1981-85, DEQ conducted involvement efforts. General public interest was low. In 1985, when EPA began oversight of technical work, EPA developed a community involvement plan based on earlier interviews and discussions with the public. The plan was updated in 1989 after another series of interviews took place. Over time, involvement activities have included public meetings, press releases, periodic fact sheets, and public comment periods at key decision points.

Summary of Groundwater Investigations/Monitoring Results

Concentrations of lead in groundwater exceeded 0.05mg/l, the maximum contaminant level established by the National Interim Primary Drinking Water Regulations, in a small portion of the fill and a larger portion of the alluvial aquifer at the time of the 1988 ROD. Lead concentrations in the fill and alluvial aquifer appeared to be associated with sulfate and hydrogen ion (measured as pH) concentrations. Elevated concentrations of lead were typically observed with similarly elevated sulfate concentrations and with low pH levels.

The 1988 ROD stated that insufficient hydrogeologic information was available to make a decision on the groundwater unit. EPA sent 104(e) request-for-information letters to property owners in the Doane Lake area to gather additional information on groundwater contamination. After the ROD for the Soils Operable Unit was issued, several industries in the area formed the Doane Lake Industrial Group and agreed to undertake an hydrogeologic investigation under a Consent Order with DEQ in 1990. A final report, *Hydrogeologic Investigation of the Doane Lake Area*, was submitted to DEQ in 1991. The report data indicated that the Rhone-Poulenc site, which is located adjacent to the Gould Site, is a potential source of organic contamination in groundwater. DEQ subsequently decided to focus on individual sites in the area rather than continue to pursue area wide studies with the industry group.

The Rhone-Poulenc site is the location of a former pesticide/herbicide manufacturing and formulating facility. The Rhone-Poulenc site is contaminated with herbicide and pesticide wastes and associated chemicals from past operations at the site. DEQ is overseeing a RI/FS for the Rhone-Poulenc site under state authority. The RI includes a comprehensive groundwater investigation which will provide information on the nature and extent of groundwater contamination that has resulted from past operations at Rhone-Poulenc. The groundwater investigation includes portions of the Gould Site, and future cleanup of Rhone-Poulenc contaminants may be required at the Gould Site.

Additional groundwater and surface water investigations have been conducted as part of the remedial action for the Soils Operable Unit and further investigation at the Gould Site. Data from sampling of groundwater monitoring wells located on- and off-site have not shown the need for groundwater cleanup for lead contamination. For example, lead levels in groundwater samples collected from wells located directly downgradient from the site have been below 0.015mg/l, the current action level for lead established by the Safe Drinking Water Act, and most of the results have been non-detect for lead. Additionally, the low pH conditions in groundwater, which coincided with elevated lead levels, have not been observed in recent years.

Other contaminants that may be associated with past Gould Site operations that have been detected in groundwater include arsenic, cadmium, chromium, and zinc. Groundwater monitoring conducted in 1995 and 1996 showed these contaminants were generally below maximum contaminant levels.

Cleanup Actions Taken to Date

Excavation and treatment of contaminated surface soils, battery casing piles, buried battery casings, matte (smelter waste), and other debris began in the summer of 1993. Excavated battery casings were processed through a battery treatment plant to separate materials (lead fines, metallic lead, clean plastic, and clean ebonite) for recycle. Contaminated soil and matte were being stabilized to bind contaminants for backfilling on site.

An estimated 24,000 tons of contaminated battery casings were treated through the treatment/separation process, with 244 tons of plastic and 88 tons of coarse lead recycled. An estimated 20,000 blocks (each measuring one cubic yard) of stabilized material was produced. Several hundred tons of contaminated debris were shipped off site for disposal. Approximately 15,000 cubic yards of contaminated material were stockpiled on site.

Several problems with the treatment/recycle process were encountered during the first year of operation. It was difficult to process the highly variable waste feed with consistent results in spite of numerous modifications made to improve the process. Estimated costs to complete the project also increased substantially. EPA subsequently determined that the selected remedy was no longer appropriate based on operating experience and conditions at the site.

In June 1997 EPA issued a ROD Amendment for the Soils Operable Unit that changed the cleanup remedy previously selected at the site. The selected remedy included the following:

* Construction of an on-site containment facility (OCF), which has a leachate collection system and allows for implementation of future Rhone-Poulenc cleanup actions, on the Gould property;

* Excavation and dewatering of East Doane Lake sediments contaminated above RCRA characteristic hazardous waste levels;

* Excavation of the remaining battery casings on the Gould property;

* Treatment (stabilization or fixation) of the lead fines stockpile, the screened Gould excavation stockpile; and other lead contaminated material identified as principal threat waste;

* Consolidating contaminated material, including sediments, treated and untreated stockpiled materials, casings, soil and debris in the lined and capped OCF;

* Filling the East Doane Lake remnant and the open excavation in the Lake Area of the Rhone-Poulenc property;

* Institutional controls, such as deed restrictions or environmental protection easements, which (1) provide EPA access for the purpose of evaluating the remedial action, and (2) limit future use of properties within the site to industrial operations or other uses compatible with the protective level of cleanup achieved after implementation of the selected remedial action, and to uses which do not damage the OCF cap and liner system or cause releases of buried materials;

* Performing groundwater monitoring to ensure the effectiveness of the cleanup and that contaminants were not mobilized during its implementation; and

* Long-term operation and maintenance requirements and reviews conducted no less often than every five (5) years to ensure the remedy continues to provide adequate protection of human health and the environment.

Nine Gould Site Potentially Responsible Parties (PRPs) signed an agreement with EPA which required the parties to complete the cleanup alternative selected in the ROD Amendment. The agreement was finalized in a Consent Decree lodged in US District Court in Portland in March, 1998. The PRPs began work in the summer of 1998 with the excavation, dewatering and stockpiling of contaminated sediments from the East Doane Lake remnant. Construction of the on-site containment facility, excavation and treatment of other contaminated materials, placement of the waste in the containment facility, and other cleanup actions required by the ROD Amendment have been substantially completed. Cleanup contractors will finish the remaining tasks, including stormwater connections and final site grading, by the end of August, 2000.

The footprint of the onsite containment facility is within Gould property boundaries with a buffer along the south western property line adjacent to Rhone-Poulenc. The buffer area was included to

allow access for investigation and potential cleanup of groundwater contamination associated with Rhone-Poulenc operations.

Scope and Role of Operable Unit

The "no action alternative" being considered in the Proposed Plan for the Groundwater Operable Unit is part of an overall strategy for cleanup of the Gould Superfund Site. The ongoing cleanup for the Gould Site Soils Operable Unit addressed contaminated waste, soil, debris, and sediments. Limitations on future use of the property, post-construction groundwater monitoring, and five-year reviews are required by the 1997 ROD Amendment for the Gould Site Soils Operable Unit.

The ROD issued in 1988 was for the Soils Operable Unit of the Gould Site. Lead contamination was the principal threat addressed in the ROD and the primary contaminant of concern addressed in the 1997 ROD Amendment.

This Proposed Plan describes EPA's preferred approach to address groundwater at the site. The proposed approach is consistent with EPA's determination in the ROD Amendment. In the 1997 ROD Amendment, EPA determined that results of previous groundwater monitoring had not confirmed lead contamination in area groundwater. Data collected in 1995 and 1996 indicated that lead contamination was not widespread or significant in groundwater near the site. The ROD Amendment further concluded that although it did not appear there was a need for treatment of groundwater for lead, monitoring would be continued to further evaluate site conditions and provide a basis for future cleanup or no-action decisions for groundwater.

Summary of Site Risks

The Gould Site is located in the Doane Lake Industrial Area. The area is zoned for heavy industrial use. The site is currently unoccupied, with over 4 acres of the site being taken up by the onsite containment facility. Future use of the property is limited to industrial or other uses compatible with the cleanup under the terms of the Environmental Protection Restrictive Covenant and Easements that were granted to meet the requirements of the Amended ROD for the Soils Operable Unit.

The area surrounding the site is currently served by a municipal water supply system that provides potable water. There are no drinking water supply wells on or down gradient of the Gould Site. There are deep wells located near the Gould Site that have been used to supply water for industrial uses (non-drinking water) purposes.

EPA evaluated the results of groundwater monitoring conducted at the Gould Site over the past several years to determine if Gould Site contaminants in groundwater present a current or potential risk to human health. Results of groundwater monitoring were compared with the 0.015 mg/l action level for lead established under the Safe Drinking Water Act. The action level, which was established by a Federal rule in 1991 and replaced the 0.050 mg/l maximum contaminant level, is based on measurements that would be taken at the tap, or point of consumption. The action level

triggers water systems into taking treatment steps if exceeded in more than 10% of tap water samples. Although there are no current or anticipated uses of groundwater as a drinking water source at the Gould Site, EPA used the action level for screening purposes in order to provide a conservative basis for deciding whether further evaluation of cleanup alternatives is necessary.

Groundwater monitoring results for lead show that only intermittent exceedences of the action level have occurred since 1993, and there have been no exceedences at the wells located on or directly downgradient from the Gould Site for the past three years. Based on these results, evaluating cleanup alternatives through a feasibility study is not necessary.

EPA has not completed an evaluation of contamination or conducted a risk assessment for organic contaminants that are believed to be associated with the adjacent Rhone-Poulenc site. DEQ is currently overseeing a detailed investigation of soil and groundwater at Rhone-Poulenc and surrounding properties. The investigation will include a risk assessment that will be used to determine the need for cleanup of contamination associated with Rhone-Poulenc.

Basis for the "No Action" Preferred Alternative

EPA has concluded that no further action is necessary under the Groundwater Operable Unit to ensure protection of human health and the environment. EPA's conclusion is based on the following:

1) Remedial action performed under the Soils Operable Unit ROD and ROD Amendment have contributed to the protection of human health and the environment by addressing sources of contamination to groundwater.

2) Groundwater monitoring data collected during implementation of the cleanup under the Soils Operable Unit have not shown a need for additional cleanup of lead contamination in groundwater. Lead levels in groundwater have decreased to below levels of concern, even with a considering the more stringent 0.015 mg/l comparison level.

3) Groundwater monitoring will continue as part of the remedial action for the Soils Operable Unit. EPA may require additional detailed investigation and cleanup of groundwater at the Gould Site if future monitoring results show that groundwater is contaminated and there is a threat to human health or the environment.

4) The Oregon Department of Environmental Quality is overseeing a comprehensive investigation of groundwater contamination associated with releases from past operations at the adjacent Rhone-Poulenc site. The investigation may conclude that there is a need for cleanup of groundwater contamination that has migrated from Rhone-Poulenc property. EPA's no action determination for the Gould Site will not limit DEQ's ability to require cleanup of groundwater associated with Rhone-Poulenc contamination.

5) Institutional controls were implemented as part of the remedial action for the Soils Operable Unit. Future use of the property is limited to industrial or other uses compatible with the cleanup

under the terms of the Environmental Protection Restrictive Covenant and Easements that were granted to meet the requirements of the ROD Amendment. EPA will evaluate the institutional controls at least every 5 years as part the 5 year reviews that will be conducted at the site. The next 5 year review for the Gould Site is scheduled for 2002.

Next Steps

EPA will consider all public comments received during the public comment period before deciding to implement the ROD. The final cleanup action will be described in the ROD. The final ROD will include a responsiveness summary, which will include a determination of which components of the proposed remedy interested persons in the community support, have reservations about, or oppose.

Additional Information

Anyone interested in learning more about the investigation, the proposed changes to the cleanup, or the Superfund process, is encouraged to review the information in the repositories maintained for the Gould Site. They contain copies of the Proposed Plan, the 1988 ROD, the 1997 ROD Amendment, and other materials related to the site. The Information Repositories are located at:

EPA Region 10 Records Center
Seventh Floor
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-4494

Multnomah County Library
Central Library
801 SW 10th
Portland, OR 97201