RCRA Showcase Pilot
Region 4

Interactive GIS Database and Aggressive Team Approach Empowers Stakeholders Corrective Action

Gaston Copper Recycling Corporation Facility
Gaston, South Carolina

Facility Description

The Gaston Copper Recycling Corporation facility (GCRC) is a 400-acre former secondary copper smelting facility located south of Gaston, in Lexington County, South Carolina. The site was in agricultural use until 1976 when Nassau Recycling Corporation (NRC) purchased it and built a facility for recycling copper and precious metals. The name was changed to AT&T Nassau Metals Corporation (Nassau) in 1984. GCRC (Southwire Company) purchased the facility in September 1990.

The facility started reducing operations in January 1995 and currently is in the last stages of decommissioning. The USEPA issued Administrative Consent Order 94-09-R under RCRA Section 3008(h) to GCRC on September 19, 1995. The order required investigation and appropriate remediation for the SWMUs and AOCs at the site.

EPA Region 4 is the lead regulatory agency in concurrence with the South Carolina Department of Health and Environmental Control (DHEC). As the current and previous owners, GCRC (Southwire Company) and Lucent (AT&T) share responsibility for the cleanup.

Timeline

1976 -- NRC purchases the Site for copper and precious metals recycling
1984 -- NRC changes name to AT&T Nassau Metals Corporation (Nassau)
1990 -- GCRC purchases the Site
1995 -- Reduction of Site operations
1995 -- USEPA issues Administrative Consent Order 94-09-R
2001 -- Enhanced efforts to return Site to productive industrial use begin

Site Data

A large amount of qualitative and quantitative information is available for GCRC to include facility knowledge, plant process information, topographic maps, CAD drawings, chronological aerial photographs, as well as chemical analysis results of numerous media samples.

Pilot Project Background

Beginning with the Order issued in 1995, regulators and facility owners followed a “traditional” RCRA process. This approach produced “traditional” results with large expenditures of resources by regulators and owners with minimal progress toward cleanup.

The Site is an ideal candidate for industrial redevelopment. It has all the appropriate infrastructure, road and rail access, and is located in a good labor market. Returning the

facility to productive use is economically very important to the local community.

Concerned about the lack of real progress and motivated by a mutual interest in seeing the Site returned to productive use, a stake holder group, including state legislators, school system administrators and county government officials, joined with the site owners and state and federal regulators in early 2001 to explore courses of action to expedite the clean up process and return the Site as a revenue generator for the area.

Nontraditional Approach

As a result of this alliance, Southwire, Lucent, DHEC and USEPA Region 4, formed a core team to expedite the RCRA Corrective Action process. The team developed an aggressive Corrective Action Schedule for investigation and remediation. To insure actions and agreements consistent with the schedule, the team set monthly meetings. These meetings provide opportunities for clarification, understanding of issues critical to team members, improve communications, and help to expedite submittals and approvals of actions.

In the early team meetings, regulators and owners agreed to incorporate all available quantitative and qualitative data into a site-wide comprehensive geographical information system (GIS). The GIS serves three main purposes: 1. provides an electronic repository for quantitative and qualitative data, 2. provides a means to analyze site chemical data, and 3. serves as a communication tool for all stakeholders.

The soil data were then analyzed using geo-statistics. For this purpose, primary contaminants of concern (COCs) were selected. The spatial datasets of primary COCs were analyzed to determine their correlational structures. These were used to determine locations that warrant further sampling and appropriate spatial sampling frequencies consistent with investigation and remediation goals. The core team to ensure adequate coverage of all SWMUs and AOCs at the facility then adjusted the resulting sampling grids.

This data repository (the GIS) enhanced discussion and agreement by allowing real time query and immediate adjustment and visual representation of data.

Stakeholder Involvement

The GIS is a valuable tool used to educate stakeholders, address their concerns and build consensus. For example, during each monthly core team meeting, the interactive GIS database is used to answer questions posed by stakeholders. Every step of the process is presented and discussed, building consensus on technical and administrative issues. Throughout the meetings, all core team members are encouraged to participate and contribute to the discussions. As a result, delays are minimized, obstacles are identified quickly and the process can move on a “fast track”.

Additionally, the GIS is currently used to communicate project progress at meetings with government officials and is anticipated to be very valuable at future meetings with the general public.

Project Benefits

The three technical and process concepts previously discussed:

1. development of a core team with the requirement for regular communications,

2. development of the Corrective Action Schedule and,
3. active use of the GIS as a tool;

are expected to greatly benefit the project and the economic interests of this community.

Use of the GIS tool combined with geo-statistical techniques to optimize the investigation will ensure a timely completion of the Corrective Action process. This approach:

- Offers a mechanism to process and incorporate both quantitative and qualitative data and sampling goals and objectives;
- Maximizes the use of available qualitative and quantitative data;
- Minimizes the need for redundant investigations;
- Provides the technical team with well-defined, interactive procedures to determine the scope and scale of the sampling and remedial actions;
- Minimizes non-productive, speculative discussions among stakeholders; and
- Provides an interactive platform for resolving conflicts among stakeholders.

Application Potential

The team meeting approach, when properly managed, produces dramatic positive results as compared to the "traditional" iterative process of exchanging papers and comments. Development of a Corrective Action Schedule to plan for completion should be integral to RCRA projects. The Corrective Action Schedule should, however, be recognized as a professional prediction that may require revision. Adding GIS database and geo-statistical techniques to the team's "toolbox" empowers the team with information needed to expedite agreement and action.

These principal components of the pilot project can be easily applied to other RCRA and CERCLA sites.

Pilot Progress Measurement/Reports

The main objective of the pilot project is expedited and satisfactory completion of the Corrective Action process as well as the Site's expedited return to productive industrial reuse. The ongoing success of the pilot is measured by the achievement of the targeted actions in the aggressive Corrective Action Schedule.

Pilot Overseers

EPA Region 4 oversees this pilot project in concurrence with SC DHEC. Key contacts are:

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