Ringwood Mines Superfund Site
Community Involvement Plan

Prepared by: the Institute for Environmental Negotiation, University of Virginia

For: EPA Region 2

563484

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Table of Contents

PREFACE

This Community Involvement Plan (CIP) was developed with assistance from the Institute of Environmental Negotiation at the University of Virginia. Additional information about the process is provided in the Introduction. A history of the site, cleanup activities and community involvement is provided on pages 5 – 10. The summary of Community Concerns, Hopes and Recommendations is found on pages 10 – 16. The Community Involvement Action Plan elements are located on pages 17 – 19.

SITE MAPS

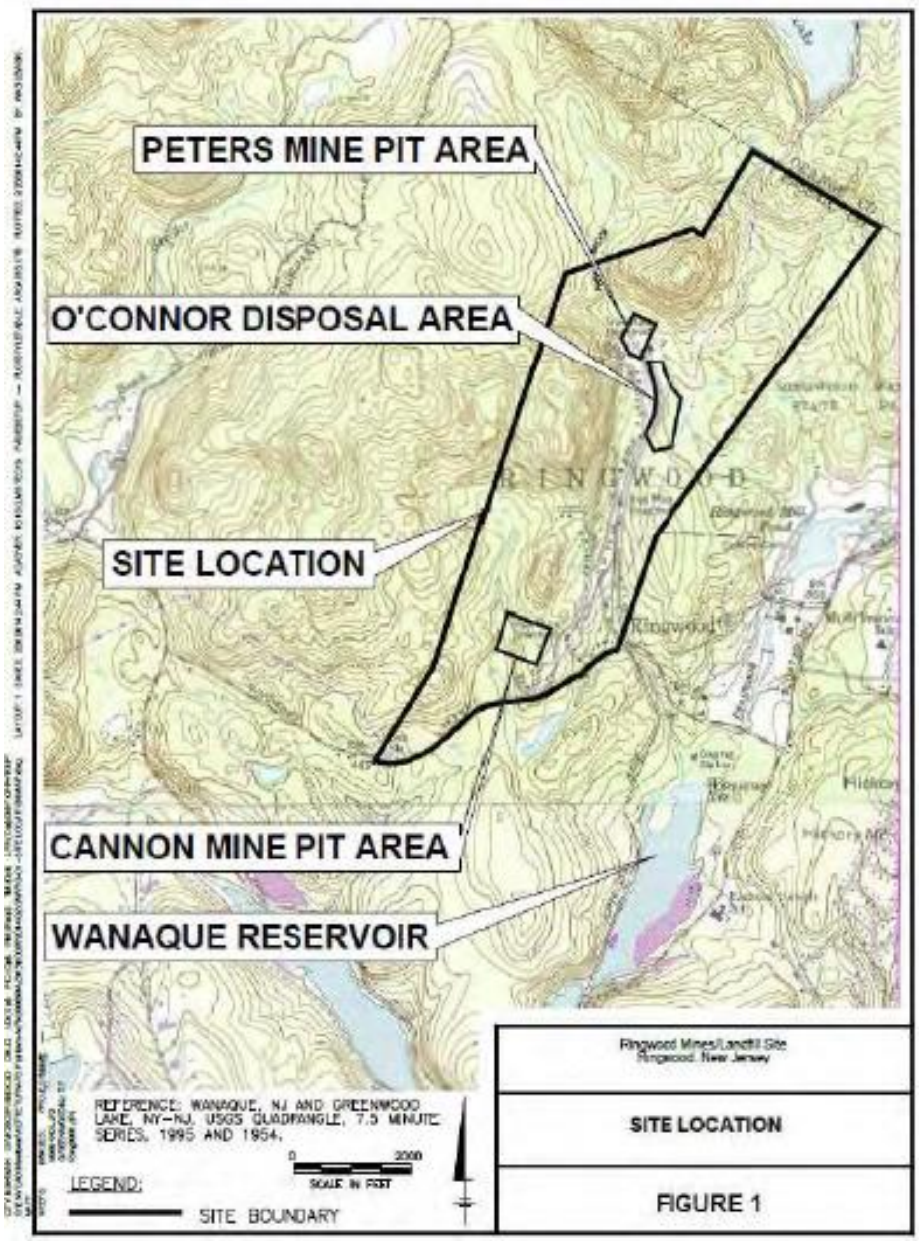

Figure 1: Site Map, Overview. From 2014 ROD, Appendix 1

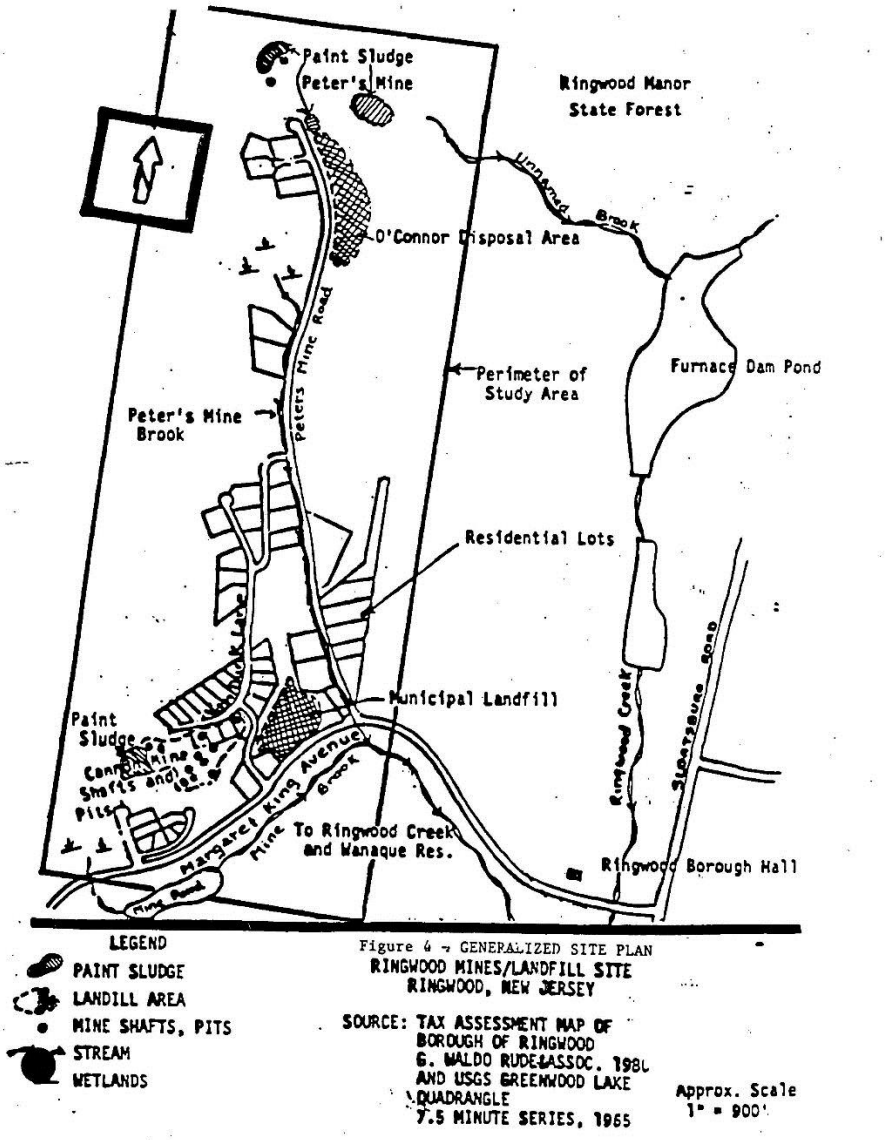

Figure 2: Site Map, Detail. From 1988 ROD, page 7

INTRODUCTION

Background

The Ringwood Mine Superfund Site in Ringwood, NJ was originally listed on the National Priorities List (NPL) in 1983. The year 1983 also marks the first year that the NPL existed and the first year of operation for the U.S. Environmental Protection Agency's (EPA) Superfund program. The lead agency for the Ringwood Mines site investigation was New Jersey Department of Environmental Protection (NJDEP), supported by EPA. After cleanup actions, involving removal of hazardous paint sludge and contaminated soils, the site was delisted from the NPL in 1994. Community concerns persisted, with EPA revisiting the site and establishing a community involvement effort in 2004.

Based on the discovery of additional locations where significant amounts of hazardous paint sludge were exposed, the site was relisted on the NPL in 2006 with EPA as the lead agency and with support from NJDEP. With the relisting of the site, EPA community involvement activities were expanded. A variety of approaches were implemented, including the creation of a Community Advisory Group, which benefited from technical assistance funded by Edison Wetlands Association and later through an EPA Technical Assistance Grant (TAG).

In developing this Community Involvement Plan (CIP), conversations were held with 14 individuals involved with the Ringwood Mines site, including community members and representatives of EPA, NJDEP and the Borough of Ringwood. Overall, respondents viewed the previous community involvement efforts, including the work of the CAG and TAG, as productive and helpful in exchanging information and incorporating community feedback into several aspects of the site investigation – including additional trenching in the O'Connor Disposal Area (OCDA). The nature of the working relations between EPA and the community disintegrated into a situation described by the majority of community members as "total distrust" when the Record of Decision (ROD) was issued on June 30, 2014.

The ROD included a "Contingency Remedy" for the OCDA in place of the previously selected preferred remedy – which had required all soil and fill, including hazardous wastes and contaminated soils, to be excavated down to the earlier mine tailings. The soil and fill would be disposed of, or recycled at, off-site permitted disposal facilities. The Contingency Remedy calls for fill at the OCDA to be consolidated and covered with a geotextile and soil cap, with the area then serving as the site for a new recycling facility.

The Contingency Remedy listed actions that the Borough of Ringwood needed to complete and submit to EPA within 6 months of the ROD, or by December 30, 2014. A number of community members have questions as to whether those requirements were satisfied within the necessary timeframe. Opposition to the Contingency Remedy resulted in a community-led petition to withdraw the proposal for the new recycling center and to undertake cleanup of contamination in the Peters and Cannon Mines and a full remediation of the OCDA. The petition was submitted to the Borough for approval by the Council or for a vote at the general election. The Borough Council met on August 2, 2016 and declined to approve the petition. Additionally, the Borough sought a court ruling on the legal basis of the petition and a judge blocked the petition from being placed on the ballot.

Request for Assistance in Developing a Community Involvement Plan (CIP)

In early June 2016, shortly after the proposal for the new recycling center advanced, EPA team members associated with the Ringwood Mines site requested support from EPA headquarters in obtaining assistance to design a CIP. The EPA Conflict Prevention and Resolution Center approved the request. Subsequently, EPA contacted SRA International, which maintains EPA's roster of pre-qualified public involvement practitioners. An inquiry was sent out to practitioners, asking interested parties to submit qualifications to assist on the Ringwood Mines effort. After reviewing the responses, the University of Virginia's Institute for Environmental Negotiation was retained to provide public involvement support for the Ringwood Mines CIP.

Purpose

The purpose of the CIP is to provide suggestions for enhancing community involvement by incorporating best practices and by reflecting and addressing the community's needs for:

- The timely exchange of complete and transparent information; and
- Opportunities to discuss issues, ask questions, raise concerns and propose possible solutions.

The goals for re-establishing a community involvement approach are to:

- Continue to improve the exchange of information between EPA and the community, by seeking and using community feedback and recommendations to improve communications
- Assist the public in understanding the project decision-making process and the role the community may play during project design and cleanup
- Ensure adequate time and opportunity for members of the community to provide input on site-related issues and for that input to be considered before EPA makes final decisions on major issues at the site

Approach

In August 2016, IEN team members Frank Dukes and Judie Talbot participated in several conference calls with representatives from EPA headquarters, SRA and EPA Region 2 to determine the best approach for developing the CIP. It was agreed that discussions with representatives of community interests would provide the foundation for creating the CIP. During the conference calls, EPA also provided information about the history of the site and options for meeting with community members. Dr. Dukes and Ms. Talbot agreed to travel to Ringwood in September 2016 to meet with the Region 2 project team, visit the site, and meet with community members who represented a range of perspectives and experiences about the site. Prior to travelling to Ringwood, the IEN team contacted the Ramapough Lunaape Indian Nation asking the Tribe for its preferred communication protocol, which was then implemented.

On September 19th and 20th, IEN team members participated in extended conversations with the EPA project team and community members. On a return visit on September 28, 2016, Ms. Talbot met with other individuals with experience of the Ringwood Mines site efforts. Participants were asked to describe their involvement in the Ringwood Mines planning process and to share their perspectives about what worked well, what could be improved upon, and how the process might move forward. Appendix A of this CIP lists the individuals who provided their perspectives on the site activities to date.

Summaries of each conversation were provided to the respective participants for their review and edits, to ensure that IEN accurately understood and recorded the key insights from the conversations. The range of community issues and concerns was used as the basis to inform and develop the content of this CIP. Additional content for the draft CIP was obtained through review of site-related documents. Appendix A provides a complete list of the documents reviewed to understand the history and conditions at the site. The draft CIP was submitted to EPA and the individuals who spoke with IEN for review and revision. The revised draft of the CIP, as well as next steps for reorganizing the CAG, were discussed with community members, consistent with best practices for public involvement, and final revisions made based on EPA and community member input.

SITE OVERVIEW

Site Description

The Ringwood Mines/Landfill Superfund Site (Site), EPA ID# NJD980529739, consists of approximately 500 acres in a historic iron mining district in the Borough of Ringwood, Passaic County, New Jersey. Magnetite (iron ore) was mined almost continuously from the mid-1700s to the 1930s. Mining operations at the site consisted of excavating, crushing and grinding the iron ore, with magnetic separation of the iron from the other ore elements (tailings). Mine tailings are found throughout the Site, including in a former mining pit (Peters Mine Pit) and a former low-lying area (O'Connor Disposal Area) which was used to settle waste mine tailings from wet ore processing operations. A second mining pit (Cannon Mine Pit) is located in the southern portion of the site.

The site consists of four Areas of Concern:

- Peters Mine Pit Area
- Cannon Mine Pit Area
- O'Connor Disposal Area (OCDA)
- Site-Related Groundwater Contamination which includes any groundwater contamination resulting from disposal activities at the site.

The site itself encompasses the community of Upper Ringwood and is accessed by two dead-end roads (Milligan Drive and Peters Mine Road) that extend north of Margaret King Avenue. The site, which is approximately 1.5 miles long and 0.5 miles wide, includes forested areas, areas of overgrown vegetation, abandoned iron mine pits and shafts, and a closed municipal landfill. Portions of the site are currently used as State of New Jersey parkland (Ringwood State Park); utility corridors (Public Service Electric & Gas and Rockland Electric Company); and Borough of Ringwood facilities, including a recycling area and a public works yard, a power sub-station, and open space (Borough of Ringwood property).

In addition, 48 residential properties are located throughout the site. The residents of Upper Ringwood, who are members of the Ramapough Lunaape tribe, have engaged in a number of activities throughout the site for generations including; hunting, fishing, skating, swimming, and collection of plants for traditional purposes. Home gardens were also tended.

Surface drainage at the site, part of the Wanaque River watershed within the larger Hackensack-Passaic watershed, is generally towards the east and south east. Runoff flows to four brooks that ultimately lead to the Wanaque Reservoir, located approximately one mile south of the site. The Wanaque Reservoir serves as a source of drinking water for over two million New Jersey residents. The water intake at the Reservoir is located about 8 miles downstream of the site. Residents living within the boundaries of the site currently receive their drinking water from the municipal water supply, which obtains water from well fields approximately two miles southeast of the site.

The initial ROD (1988) identified two aquifers:

- an upper aquifer consisting of glacial till and overburden and extending down to a depth of 60' with flows generally to the south and discharges to local surface water and the Wanaque Reservoir; and
- a lower aquifer comprised of a complex fracture system of gneiss bedrock.

Site History

Within the site boundaries, the mining of iron ore occurred almost continuously from the mid-1700s until the early 1900s. All mining activities had ceased by the 1930s. The federal government purchased the land in 1941, leasing the property to Alan Wood Steel Company. In 1958, Pittsburgh Pacific Company (a mining company based in Minnesota) purchased the land through a government auction. In January 1965, the Ringwood Realty Corporation, a wholly-owned subsidiary of Ford Motor Company, purchased considerable acreage at the site (reportedly as much of 900 acres at the site).

Records indicate that in 1967, the Ringwood Realty Corporation entered into a contract with the O'Connor Trucking and Haulage Corporation for the disposal of wastes generated at the Ford factory located in Mahwah, New Jersey. O'Connor Trucking disposed of various waste which it received from Ford, including plant trash, paint sludge, drummed waste and other non-liquid plant wastes, at the Peters Mine Pit, the Cannon Mine Pit and the O'Connor Disposal Area (OCDA) at the Site. The chemical composition of the paint sludge includes lead, arsenic, chromium, naphthalene, toluene, ethylbenzene, xylene, trichloroethene, and low levels of PCBs.

The hazards associated with the site include, but are not limited to, the possibility of: dermal (skin) contact, inhalation, or ingestion of hazardous substances at the site. These types of exposures may cause a variety of adverse human health effects. The possibility of hazardous substances migrating from the site poses another potential hazard.

Unpermitted and unauthorized disposal of waste materials, unrelated to that generated by Ford, had occurred for many years in different parts of the site. In some areas, these other waste materials are intermingled or layered with Ford waste.

In 1969, the Ringwood Realty Corporation began selling or donating portions of the site. In 1970, acreage was sold to the Public Service Electric and Gas Company for use as a transmission line right of way. Also in 1970, 290 acres located in the southern portion of the site were donated to the Ringwood Solid Waste Management Authority (an entity of the Borough of Ringwood). In 1971, disposal of Mahwah wastes on Borough property ceased. From 1972 to 1976, the Borough operated a municipal landfill on the property that had been donated by Ford.

A 1989 Health Assessment by the Agency for Toxic Substances and Disease Registry (ATSDR) reports that Ford continued to dispose of industrial wastes in the area of OCDA, on a portion of 150 acres which Ford retained title to, until 1973, when it donated 35 acres of land to Housing Operation with Training Opportunity (HOWTO), a New Jersey not-for-profit corporation, and 109 acres to NJDEP which was added to Ringwood State Park. At some point in time, the property belonging to HOWTO became tax-defaulted and the Borough of Ringwood took possession of the property in 1981. It is believed that by December 21, 1973, the Ringwood Realty Corporation no longer owned any land at the Site.

The Community

Upper Ringwood

Over the course of mining operations, between the mid-1700s and the 1930s, structures were built to house mine workers and their families. Other structures, such as the hospital, were established to provide services for the community. Mining laborers included members of the local indigenous Native

American tribe, the Ramapough Lunaape, whose families continue to live in the Upper Ringwood area. Recognized by the State of New Jersey in 1980, the Ramapough Lunaape Indian Tribe is pursuing federal recognition.

The United States Census Bureau records indicate that 866 people live within one mile of the Site. At least 200 people are estimated to live within the 48 residences located within the Site boundaries. Members of this community have strong ties to the land and hunt game and consume vegetation gathered from the Site. The lands within and adjacent to the site have traditionally been, and continue to be, used for recreational and subsistence activities.

Borough of Ringwood

The Borough of Ringwood encompasses an area of roughly 28 square miles, with a population of about 12,225 reported in the 2010 census. The Borough includes the northern half of the Wanaque Reservoir. The southern half of the Reservoir contains the intakes that supply drinking water to more than 2 million people.

The government leadership for the Borough includes the Mayor, Municipal Council and Borough Manager/Director Public Works. The Borough itself is identified as a potentially responsible party (PRP), although Ford is the primary PRP.

Housing

Many homes in the area of Upper Ringwood are older, with some more than 100 years old. Previously, a number of the homes did not meet contemporary building standards. For example, some homes had plumbing located outside of the exterior walls and some homes did not contain a bathroom. From the 1960s through to the 1980s, U.S. Housing and Urban Development grants funded improvements to the homes.

Homes in Upper Ringwood have an approximate value of 40% of that homes in other areas of Ringwood, as reported in the report *Environmental Justice Concerns and Communication Problems Complicated Cleaning Up Ringwood Mines/Landfill Site* (*EJ Report*) issued by the US EPA Office of Inspector General. A number of community members commented that property assessments are significantly inflated compared to prices realized through actual property sales, resulting in property taxes based on inflated values. One community member reported that when Upper Ringwood homes are auctioned off, the new owners find they are unable to resell the homes and that the homes are often rented back to the original owners.

CLEANUP ACTIVITIES AND COMMUNITY INVOLVEMENT

Initial Listing and Delisting

The initial listing of the Ringwood Mines on the National Priorities List (NPL), in 1983, occurred during the first year of the initiation of the NPL and the Superfund Program. EPA's *EJ Report* described minimal community engagement during the initial listing. As a result, community members received little information about the original cleanup activities at the site, which removed 7,000 cubic yards of surficial (exposed) paint sludge contaminated soil.

The EJ Report suggested that the lack of original outreach could have resulted from policy in 1983 that did not require a community relations plan for a cleanup action funded by a PRP. EPA guidance changed in 1986, requiring a Community Relations Plan for cleanup actions at NPL sites. During 1985 and 1986, staff from NJDEP encouraged EPA Region 2 to prepare a Community Relations Plan and identified potential community outreach problems at the site. Community interviews for the CRP were conducted by EPA in 1988, and the Community Relations Plan was issued in July of 1988. The first public meeting was held in August, followed by the Record of Decision being issued in September of 1988. A 2007 report from the EPA Office of Inspector General, *Limited Investigation Led to Missed Contamination at Ringwood Superfund Site*, stated that no documentation was found to verify that public notice requirements relating to the delisting of the site or of five-year monitoring reviews were followed. One community member stated that the Borough of Ringwood was informed that the site would be de-listed, but the Borough did not notify the public.

After the site was delisted, EPA released a fact sheet in response to community concerns raised in 1992. After receiving a complaint in 1995 that paint sludge still remained at the site, the EPA Project Manager conducted a site visit. No additional community relations activities were conducted at the time.

Relisting

By 2003, Upper Ringwood community members had retained legal counsel to ask the Agency for Toxic Substances and Disease Registry (ATSDR) to investigate whether past and current exposures to hazardous materials presented a public health hazard. In response to the request, ATSDR partnered with the New Jersey Department of Health and Human Services to conduct a Public Health Assessment which was released in 2006.

In 2004, EPA conducted a site visit in response to a report of additional paint sludge. Upon EPA's return to the site, Pat Seppi became EPA's Community Involvement Coordinator for the site. Ms. Seppi conducted a public meeting in December 2004, with presentations from the Ringwood Neighborhood Action Association, community members' legal counsel, Edison Wetlands Association, and Chapin Engineering.

Throughout 2005, two parallel paths defined community engagement. Discouraged by the lack of progress in cleaning up the site, a number of community members investigated legal remedies. Simultaneously, EPA sought to further engage local residents about conditions and activities at the site. As a result, 2006 marked both the filing of a multi-action toxic tort lawsuit against Ford as well as the establishment of the Community Advisory Group (CAG). The EJ Report states that the CAG met several times during 2006 and needed additional structure to perform effectively. The site was relisted on the NPL in September 2006.

With the relisting of the site, cleanup operations at the Ringwood Mines are associated with the following three Operable Units (OUs) established by EPA:

- OU1 relates to site-wide activities related to the initial NPL listing, in 1983, to address waste and hazardous materials
- OU2 relates to site-wide activities related to the current NPL relisting, in 2006, to address waste and hazardous materials
- OU3 relates site-wide groundwater conditions that include any groundwater contamination resulting from disposal activities at the site.

Since 2004, 44,000 cubic yards of paint sludge and contaminated soils have been removed (beyond the 7,000 cubic yards removed during the initial cleanup in 1988).

The CAG: 2007 - 2015

In 2007, a year after first being convened, the CAG was reorganized and EPA provided two years of funding for a facilitator. EPA identified three potential facilitators for the project, with the final selection made by the community. The CAG met on a monthly basis with Michael Lythcott as the facilitator. Senator Lautenburg's office had also contacted Mr. Robert Spiegel, Executive Director of Edison Wetlands Association, and asked him to become involved with the Ringwood effort based on his experience with other Superfund sites. Mr. Spiegel would become the CAG facilitator after the funding from EPA ended. In addition to Mr. Spiegel volunteering his time in facilitating the CAG meetings, Edison Wetlands Association provided initial funding for Mr. Rich Chapin to provide technical support and submitted a successful application for an EPA Technical Assistance Grant. This grant funded Mr. Chapin's continuing role as a technical advisor.

Respondents generally reported that the CAG worked well for quite a while until losing some its energy when, by 2010, several key members left the group. Conditions further deteriorated in 2014 with the announcement of the Record of Decision and the Contingency Remedy. By March of 2015, the Technical Assistance Grant concluded and Mr. Spiegel stepped away as the facilitator. Although Chief Vincent Mann came forward to chair the meetings, the CAG meetings ceased some time in 2015.

The Record of Decision (ROD) and Contingency Remedy

After many years of what is reported by most community members as generally productive exchanges between community members, EPA and the Borough of Ringwood, the current situation is now characterized by intense community anger and frustration. The primary factor identified by community members for this change is a reversal of the proposed treatment for the O'Connor Disposal Area (OCDA). This occurred after assurances, described by respondents as promises and commitments, were made by EPA Region 2 leaders that all hazardous materials and contaminated soils would be removed from the OCDA and disposed off-site.

Overall Approach to Community Involvement

When discussing the community involvement that has occurred since 2004, most community members stated that the EPA team members (Joe Gowers and Pat Seppi) had good intentions and were trying to do their best. Overall, respondents reported that the local EPA project team has done a good job in sharing and explaining information, and in hearing concerns. With the CAG and TAG in limbo, some individuals expressed a desire that Joe Gowers (the Remedial Project Manager) would take a closer look at technical issues and assumptions when reviewing the technical proposals offered by the PRPs. Many residents spoke of feeling betrayed by the decision of EPA Region 2 to approve the Contingency Remedy and some community members chose not to speak with IEN about the CIP at this time. The respondents who did talk with IEN, including those who do not support the Contingency Remedy, emphasized the need for timely and informed discussions between EPA and the community about site-related activities. Community members spoke candidly about their experiences and offered concrete advice about how EPA could best involve the community. Their insights and recommendations serve as the basis for this CIP.

COMMUNITY CONCERNS, HOPES AND RECOMMENDATIONS

Meaningful Public Involvement

A fundamental concern expressed by many of the respondents is that EPA's decision to approve the Contingency Remedy was contrary to the stated desires and cleanup objectives stated by the CAG. Members who had served on the CAG emphasized their frustration at how EPA's final cleanup decisions failed to incorporate the recommendations of the CAG. Several members wondered if future recommendations from the community would also be disregarded. One individual stated that the outcome of the public involvement process to date failed to meet key principles of community participation and engagement, or of managing the local environment, as described in the publication "Environmental Management and Community Participation: Enhancing Local Programmes" (United Nations Environmental Programme, 2004).

Two individuals mentioned difficulties in receiving timely and/or written responses to information requests submitted to EPA. Others pointed to the lack of transparency by the Borough or EPA in terms of what is being decided or negotiated in terms of the cleanup decision, with community members learning of some decisions through the local newspaper. Another individual spoke of the obstacles that were encountered in seeking to submit an application for a Technical Assistance Grant. All of these serve as examples of challenges to public participation where community members can influence outcomes and contribute in a way that they find meaningful.

Public Health

Community members expressed how, for decades, Upper Ringwood residents were exposed to hazardous materials through multiple known exposure pathways (ingestion, inhalation and direct contact). There is frustration and distrust with public health assessment protocols, monitoring efforts and testing results that find no direct links between health impairments and exposure to hazardous materials. One person expressed that it was especially insulting to hear that no health consequences are attributable to long-term exposure, while cleanup teams were wearing hazmat suits to minimize short-term exposure. Several respondents noted that it is outsiders with no responsibility for the cleanup or public health assessment, such as New York University's School of Medicine, who are coming forward to conduct surveys and provide examinations to better understand potential linkages between exposures and health impacts.

Several community members stated that Upper Ringwood has, and continues to see, very high rates of death. Respondents recounted how local residents have struggled with or succumbed to cancer or auto-immune diseases. Several people pointed to the investigative reporting by The Record, including the 2005 series on "Toxic Legacy" which listed cases of lung cancer, thyroid cancer, platelet disorders, bone cancer (Ewing's sarcoma), pancreatic cancer, bladder cancer, non-Hodgkin's lymphoma, Henoch-Schonlein purpura, immune thrombocytopenic purpura, hidradenitis suppurativa, elevated blood lead levels and asthma. The "Toxic Legacy" *Overview* reports that epidemiological studies are unable to confirm a cancer cluster in Upper Ringwood, or an environmental cause, without sufficient numbers to allow a statistically valid assessment.

The 1989 Health Assessment for Ringwood Mines, conducted by the Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Public Health Service, reported "that this site poses a potential public health concern because of the risk to human health that could result from possible exposure to

hazardous substances at levels that may result in long terms (sic) adverse health effects." A subsequent Health Assessment, in 2006 in conjunction with the New Jersey Department of Health and Senior Services, used population studies in concluding that exposures to contamination at Ringwood Mines "constitute an ***Indeterminate Public Health Hazard*** as no data or insufficient data are available for evaluation" (p. 43). Also, "Many of the community's [health] concerns are consistent with health effects of lead and arsenic exposure reported in the scientific literature; however, these health outcomes may also be caused by other environmental and non-environmental risk factors" (p.44).

One respondent explained that there has never been an accounting of how much paint sludge was dumped at the Ringwood Mines site. As a result, there is no way of knowing how much sludge remains at the site.

Several community members told of the Borough's Park Department using soils from the site for fill at parks and ball fields. There are concerns that contaminated soils from the site have been spread throughout the larger community.

Trust and Accountability

High to extreme levels of distrust currently exist in the community as a result of what are expressed as unfulfilled promises and commitments made by various entities on a range of substantial issues, including settlement payouts, the preferred remedy identified in the ROD, and repair of sinkholes that continue to present a danger to the community. The major sense of betrayal reported about EPA revolves around the change in the preferred remedy. Specifically, community members describe how, after assurances from EPA Region 2 that hazardous materials and contaminated soils at OCDA would be excavated and sent off-site for disposal, a Contingency Remedy was approved that instead will consolidate and cap wastes and contaminated soils at OCDA.

One individual noted, "There is confusion about who to trust – or not." There is a general sense among residents that assurances provided one day can be completely reversed at a later date. As a result, the preference for videotaping public meetings and CAG meetings has evolved to where multiple meeting participants are now conducting their own videotaping activities to document the meetings. Several community members remarked on the current lack of trust and the need to find a way forward.

Also, when questions are submitted to EPA, some members stated their preference that responses be made in writing. This helps create a good foundation for establishing trust, since answers to important questions could otherwise quickly become hearsay without documentation. Similarly, fact sheets that explain decisions that have been made, and why, provide a record of the process that can be referenced by the entire community. A key outcome of an effective communication and outreach plan is to promote informed decision-making, supported by a well-documented process.

Some respondents expressed that when EPA is sharing information that the community wants to hear, high-level managers make an appearance to show their leadership is creating results. Conversely, when unpopular decisions need to be communicated, the local EPA project team members are left to relay the message. This is viewed as inappropriate, unfair and even cowardly.

Community Recommendations:

- Decision-making processes should be clearly described in advance of any decisions being made, including: who the decision-makers are; how and where community preferences are taken into account; and appeals processes, if any.
- Major decisions should be announced and explained by high-level EPA managers who are responsible for the decision being discussed.
- Provide written responses to questions and make the responses readily available to the public.
- No assurances should be made regarding outcomes that have yet to be decided.
- Work with community members to develop communication guidelines on timeliness of information, including when meeting notices, agendas and meeting materials will be available for site-related meetings and activities.
- Make it easy to find site-related documents and resources. Consider creating an online "clearinghouse" for information

Future Land Use: Proposed Recycling Center

A number of community members state that the proposed recycling center does not represent a meaningful reuse outcome. This option was introduced after the draft ROD was prepared and has generally been described as a "last minute" development. The proposal for the recycling center was not contained in the May 2012 draft Feasibility Study for OCDA and did not appear until the September 2013 Revised Feasibility Study for OCDA and related correspondence. Opposition to the proposed land use is reported by members of Upper Ringwood and by members of the larger Ringwood community. One response by the community to the proposed recycling facility was a community petition to put the proposal on the November 2016 ballot. The Borough of Ringwood and Ford Motor Company raised a legal challenge to the petition and the judge blocked the petition from appearing on the ballot.

Many community members expressed that the decision to approve a new facility for the site was made unilaterally by the Borough and that residents did not have an opportunity to review and provide input on the decisions made by the Borough. Similarly, residents state that they did not have a chance to discuss the change in reasonably anticipated land use through the EPA decision process. Community members raised questions as to:

- the need for a new recycling facility;
- potential levels of truck traffic through a residential community on narrow roads;
- implications for emergency response capabilities, which may be constrained by inadequate water pressure in water lines supplying hydrants in Upper Ringwood; and
- compatibility of the proposed future land use with current zoning designations.

It was noted that the potential change in reasonably anticipated land use was designed to require a less stringent cleanup, the Contingency Remedy, which results in a savings of approximately $27 million in cleanup costs to Ford Motor Company compared to the selected remedy.

Contingency Remedy

A review of the ROD shows that the remedy that was originally proposed (5A, "Removal of Fill for Off-Site Disposal") was the most extensive and expensive remedy, allowing the area to be used in the future without restrictions. The justification for selecting this remedy emphasized that the engineering and institutional controls associated with Alternatives, 3, 4A and 4B (involving placement of an engineering cap) represented two major drawbacks:

- challenges in preventing unauthorized access to the OCDA; and
- the continued presence of wastes, at this part of the site, would inhibit or restrict use by the local community to an area historically used for culturally and traditionally significant activities.

The Contingency Remedy addresses challenges in preventing unauthorized access to the OCDA; however, community members stated that the Contingency Remedy itself would inhibit and restrict access to an area that is important to the local community for culturally and traditionally significant activities. Also, consideration and approval of the Contingency Remedy is dependent on satisfying a number of conditions. Community members say it is not clear that the conditions were met within the required timeline.

Community members have questions and concerns as to how hazardous materials and contaminated soils will be dealt with as they are encountered during the cleanup activities at OCDA. The description of the selected remedies for the Peters Mine Pit and Cannon Mine Pit areas include bulleted clauses that paint sludge and/or drums that may be encountered would be excavated and disposed of off-site. Segregated non-hazardous soil or fill may be reused as fill (ROD, pp. 56, 60).

Respondents noted that the description of the Contingency Remedy is not clear in explaining what happens to any paint sludge or drums encountered during grading and consolidation activities at OCDA. The ROD states that "Any materials encountered in the fill that is not suitable for use as sub-grade material under the cap would be segregated and transported for off-site disposal" (ROD, p. 67). Some community members wonder if some level of contamination or presence of hazardous material would be acceptable as a "sub-grade material."

Community Recommendation: The treatment of hazardous materials and soils encountered during activities related to the Contingency Remedy at OCDA should be clearly described and discussed with the community.

Community members also noted that geotextile caps present their own challenges as a permanent solution to preventing exposure to hazardous materials, commenting that caps are known to fail. Several individuals stated that they needed more information on why caps fail and how cap adjustments or repairs would occur if a recycling center was located on top of the cap. One individual remarked that the analysis of alternatives uses cost-benefit evaluations based on a 30-year project lifespan. Since the contamination will persist beyond 30 years, this individual recommended that complete life-cycle costs be used for the analysis and include maintenance and replacement costs.

Community Recommendation: Additional information and discussion is needed on failure and repairs of geotextile caps, with consideration of complete life-cycle costs.

Environmental Justice (EJ) Considerations

One theme that repeatedly surfaced during conversations was that the location of the dumping, and the proposed Contingency Plan, would not have occurred in higher-income communities. For example, residents stated that dumping would not have occurred in the area of Erskine Lakes or West Milford. Similarly, there were comments that Superfund cleanup activities at nearby sites were focused on removal of hazardous materials, rather than contamination being consolidated and covered with an engineered cap.

Sinkholes

Subsidence issues are noted as an ongoing concern, with subsidence incidents reported in 1961, 1979, 1998 and again in 2005, when a sinkhole formed on a residential property located about 600 feet from a paint sludge disposal area. In 2006, additional sinkholes formed between two residential properties located near the former Cannon Mine Pit. In one case, investigations indicated the presence of shallow voids related to mining activities, resulting in three homes being declared as uninhabitable. Residents attribute more recent sinkholes to dewatering of the mines associated with cleanup actions. One person reported that the Borough had previously received approximately $400,000 in grant funds to fill a sinkhole on a residential property, but the funds were redirected to other projects at the site. The sinkhole is reported to still be open and posing a danger to the community. Additional sinkholes were reported in 2015 and 2016.

Continuation of the CAG

All of the community members who agreed to speak about this CIP stated that it would be very helpful to re-establish the CAG.

CAG meetings were reported as being at their best when the CAG was well-structured and well-supported. It was specifically mentioned that the facilitator and technical advisor developed agendas, informed the presentations, and reviewed and explained technical documents. While a few critiques were offered, community members generally agreed that Mr. Spiegel did a good job in leading the CAG. The technical assistance provided by Mr. Chapin was especially appreciated. Community members stated that they felt as though Mr. Chapin was a technical advocate for Ringwood.

Due to professional and personal considerations, Mr. Spiegel's and Mr. Chapin's work with the CAG concluded during 2015. Since then, community members report that the tenor of the CAG meetings has deteriorated. While people stepped up with good intentions, and did the best they could to lead the CAG, the result has not been the same. Community members are concerned that meetings where participants repeat known complaints and "fan the flames" are not getting the community's needs met.

All of the respondents indicated that there are still important conversations pertaining to the site that need to continue. People mentioned the need to reestablish the CAG, regardless the outcome of the selected or contingency remedy. One individual noted that a benefit of the CAG is that membership provides more consistent and sustained participation, to better consider and address issues. This is a different from the input obtained at public meetings where different people participate at different times, and typically address the issue of the moment.

Community Recommendations Regarding Continuation of the Community Advisory Group (CAG)

- The CAG should have an impartial facilitator.
- The CAG should be supported by a technical advisor.
- There should be discussions with the community about who sets up and/or leads the CAG, and how participation is decided.
- CAG participants should include a mix of experienced and new CAG members, with representatives of different groups that are impacted in different ways. Members need to be knowledgeable and able to communicate directly with others in the community.
- CAG meetings should include presentations by those who have information to share – for example, experts on brownfields redevelopment and insurance actuaries. Multiple entities should be presenting information about the site, including NJDEP and Ford. The responsibility for providing information should not fall just to EPA.
- Consider setting standing meeting dates, times and locations to make it easier for people to participate and know when and where meetings will occur.
- Provide timely better notification of CAG meetings, including notices for those who don't have email.
- Meetings should be recorded and meeting summaries should be distributed.
- In the past, meetings have occurred in the Council Chambers, the Church and the Middle School all-purpose room. The benefit of using the Council Chambers is that the meeting can be recorded, while the Middle School can accommodate a larger audience, and the Church is conveniently located for members of the Upper Ringwood community. The CAG can offer input about which locations might be best.
- The decision-making process needs to be clearly defined at each opportunity, with an explanation of how input from the CAG will be taken into consideration.

Continuation of Technical Assistance

Community members described the value of having technical assistance provided through the TAG, explaining that a technical advisor can support the CAG by: asking detailed questions about the technical work, working with the community to develop suggestions for improving the technical approach, and helping to translate technical concepts back to the community. Community members strongly emphasized the importance of having technical assistance as the process moved forward to:

- review and provide input on the remedial design for OU2 (site cleanup)
- inform decisions about data, technology, monitoring and management options for OU3 (groundwater)

Several respondents also noted the important role that an EPA Remedial Project Manager can fill in questioning assumptions about technical proposals and reviewing and commenting on technical documents and approaches. Some encouraged the EPA Region 2 Project Manager to be more engaged in critically evaluating technical submittals.

In May of 2016, the Ramapough Conservancy submitted a Letter of Intent, expressing interest in a TAG and TASC. EPA Region 2 then posted a public notice of the Letter of Intent, which states that applications for the TAG must be submitted within 60 days of the notice. A representative of the

Ramapough Conservancy related that the TAG application was not available on the EPA website and that, despite repeated requests to the EPA Region 2 Technical Assistance Coordinator, the Conservancy was unable to obtain a TAG application.

A conference call was held with members of the Ad Hoc Planning Team, on March 1, 2017, to discuss EPA's Technical Assistance Services Contract (TASC). Community members expressed concerns about the neutrality and objectivity of technical assistance providers whose services are obtained through the TASC. There is a preference for a TAG where the CAG could select the technical assistance provider. There is also interest in using the TASC program for initial review of technical documents while applying for a TAG. Members of the Planning Team asked to work with the national contractor (Skeo Solutions) in identifying potential technical assistance providers. (For additional information about the types of technical assistance available, see Appendix C: Technical Assistance Programs.)

Community Relations

Borough as PRP

The majority of community members interviewed believe that the Borough's status as a PRP constrains the Borough in advocating for its residents. One person remarked that the Borough should be fighting Ford (i.e., advocating for a complete cleanup) as vigorously as the Borough is currently fighting its residents. As a result of the petition process to block the new recycling facility, the judge indicated that the Borough and Ford have entered into contractual agreements; however, the documents that have been released are for term sheets that precede a contract. Residents report that meetings between the PRPs and EPA are not open to, or discussed with, the community. Subsequently, community members have no way of knowing what the Borough is contractually committing to Ford.

Some community members state that the Borough is using the threat of property tax increases to increase support for the Contingency Remedy. Others mention that the Borough is using intimidation to discourage opposition of the recycling facility; one person stated that a CAG meeting, held in the Council Chambers, saw a number of armed police present at the meeting. There is a sense among several of the respondents that the Borough's status as a PRP is a major factor in tension between the Borough, Upper Ringwood and the larger Ringwood community.

Ringwood-Upper Ringwood Relations

Several community members mentioned tensions between Upper Ringwood and the larger Ringwood community. One person stated that there is a surprising amount of innuendo and racist stereotyping about Upper Ringwood. Historically, the larger community did not give much attention to conditions in the Upper Ringwood neighborhood. Broader attention increased when concerns about groundwater contamination were raised which could impact the larger community.

Within Upper Ringwood there is a strong sense of injustice and outrage about the perceived lack of concern for the challenges the community faces. Some community members stated that residents of Upper Ringwood aren't able to sell or refinance their homes and, as a result, those who want to move out are not able to do so. There are also reports that "selective enforcement" triggers citations for violations in Upper Ringwood. Conversely, it is reported that some residents within the larger Ringwood community feel that "selective enforcement" benefits the Upper Ringwood community where violations that would be cited elsewhere go uncited in Upper Ringwood. Also within the larger community, it was suggested that there is some lingering resentment associated with the Mann v. Ford lawsuit.

Water Quality

Many community members stress the need to remain diligent in monitoring groundwater and surface waters for possible contamination, since residents receive their water supply from municipal wells located approximately two miles southeast of the site. Overall, respondents indicated that there is still much that is unknown about local groundwater conditions both onsite and offsite. Results from various water quality monitoring include samples that have tested high for contaminants where the source has not been identified:

- The initial NPL listing of the site in 1983 was the result of water sampling conducted by NJDEP in the Peters Mine Airshaft which identified levels of benzene, ethylbenzene and xylene (note: subsequent water quality monitoring also tested for arsenic and lead)
- Results from groundwater monitoring showed high levels of 1, 4 Dioxane in August 2013
- Sally's Pond, located between the site and Wanaque Reservoir, tested high for lead in 2009

Results from the 2016 site water monitoring report, prepared by Cornerstone, show that of the 67 site locations that were sampled in August of 2016:

- 19 locations exceeded New Jersey Groundwater Quality Standards for 1, 4-dioxane
- 7 locations exceeded standards for benzene
- 6 locations exceeded standards for chloro-ethane
- 14 locations exceeded standards for total arsenic
- 4 locations exceeded standards for total lead

Note: Number of locations are not cumulative. Some locations had an exceedance for only one compound and other locations had exceedances for several compounds.

Also, one community member raised concerns about whether local water quality is being affected by the adjacent Ringwood State Park, as a result of a septic system.

See Appendix D for an overview of the Ringwood Mines Superfund site water monitoring program.

Photo by Ms. Judith Sullivan

It is reported that fish have been caught in Sally's Pond covered in a slimy rainbow colored grease coating. The appearance is consistent with a chronic condition described for largemouth bass. The condition is not associated with a systemic infection of the fish and, while the causes are unknown, it may involve a chronic stressor.

COMMUNITY INVOLVEMENT ACTION PLAN

This CIP was prepared in accordance with the following *Core Principles for the Practice of Participation* developed the International Association for Public Participation (IAP2):

1. Public participation is based on the belief that those who are affected by a decision have a right to be involved in the decision-making process.
2. Public participation includes the promise that the public's contribution will influence the decision.
3. Public participation promotes sustainable decisions by recognizing and communicating the needs and interests of all participants, including decision makers.
4. Public participation seeks out and facilitates the involvement of those potentially affected by or interested in a decision.
5. Public participation seeks input from participants in designing how they participate.
6. Public participation provides participants with the information they need to participate in a meaningful way.
7. Public participation communicates to participants how their input affected the decision.

See: http://www.iap2.org/?page=A4

Continuing Community Involvement Activities

EPA Region 2 will continue all of the outreach and community involvement activities that have occurred over the years, including the following elements:

- maintaining and updating the EPA Project Website with timely announcements of meetings, agendas, proposed activities and events
- maintaining and updating the Ringwood Mines Information Repository at Ringwood Library
- hosting community meetings to share information on, and discuss, project-related issues and activities
- develop and distribute Fact Sheets, as appropriate, using brief, plain language to inform the public of important project developments and timelines
- email distribution of updates, as needed
- continued interaction with community members in response to inquiries and comments
- continued briefings to the media and elected officials

Enhanced Community Involvement Approach

In the process of re-establishing a Community Advisory Group, EPA Region 2 will seek community member participation in an Ad Hoc Planning Team. The Planning Team will work with the Community Involvement Coordinator, Pat Seppi, on making interim suggestions and recommendations regarding community engagement activities such as:

- potential topics and presentations for public meetings
- development or refinement of meeting agendas

- scheduling and locating meetings
- when (how far in advance) and how (through which means) meetings are noticed, to allow people to plan and prepare for meetings
- distributing agendas in advance of meetings (and recommendations on how far in advance agendas should be distributed)
- general guidelines for when meeting minutes will be available
- notification and distribution of meeting announcements and project-related materials
- updating the project website to make it easier to use

Once the CAG is re-established, CAG members will be responsible for discussing and making recommendations on these types of activities.

Re-establishing the Citizens Advisory Group

EPA Region 2 will work with interested community members to begin the process of reestablishing the CAG. Activities may include:

- revisiting where the CAG excelled or fell short
- Identifying community interests related to the project-related cleanup activities and groundwater conditions, and the organizations or individuals who represent those interests
- developing preliminary options for the format and structure of the CAG, which would be further discussed and refined as CAG membership is established
- scheduling a meeting with community members to discuss the CIP and next steps for re-establishing the CAG

Once established, CAG members would engage in a range of activities that could include:

- discussing and informing issues relating to project-related activities for Operating Unit 2 (site cleanup) and Operating Unit 3 (groundwater)
- informing CAG and public meeting agenda concepts and presentations
- assisting with outreach in providing notices of meetings
- identifying preferred qualifications for potential facilitators
- discussing technical assistance support with the prime contractor for the Technical Assistance Service for Communities (TASC) program

Re-establishing Technical Assistance

The EPA Region 2 Community Involvement Coordinator has requested technical assistance through the TASC to support the Ringwood Mines project in reviewing four technical documents:

- 2016 Groundwater and Surface Water Investigations Report
- Soil Sample Results for the O'Connor Disposal Area
- Addendum to the Groundwater Remedial Investigation Report
- Groundwater Feasibility Study Report

As a result of a conference call of the Ad Hoc Planning Team on March 1, 2017, further discussions will be held with community members on pursuing technical assistant through a TAG and/or TASC.

Other Items

Process

- EPA will explain the anticipated timeline and key activities associated with the remaining tasks associated with OU2 (site cleanup) and OU3 (groundwater).
- EPA will provide a clear description of the decision-making process including:
  - Region 2 chain of command and how to communicate with different EPA representatives
  - For each major decision-point, EPA will explain: Who is making which decisions, What is/is not the role of public input; and What EPA can/cannot do
  - How EPA interacts with the PRPs
- Major decisions should be announced and explained by high-level EPA managers who are responsible for the decision being discussed. Subsequent discussions and meetings may involve mid-level managers and other EPA staff.
- No assurances should be made regarding outcomes that have yet to be decided.
- EPA will provide and post written responses to questions within a date-certain timeframe, using clear and non-technical language. EPA will be candid if there is no answer available to a question and indicate why (e.g. data isn't simply not known, a decision is yet to be made).
- EPA will provide an early and full release of sampling results and meeting minutes, documents and/or recordings.

Specific Topics

- Clarify and discuss with the community how hazardous materials and contaminated soils encountered during cleanup activities at OCDA will be handled. EPA will make sure that this is clearly spelled out in the Remedial Action Work Plan to be prepared by the PRPs' consultant prior to implementation of the work.
- EPA will work with community members to identify a process for providing additional information on geo-textile caps, including a candid discussion on why they fail and how repairs are made to geo-textile caps. The process may include working with a Technical Assistance provider.

RESOURCES

Contacts

EPA Region 2

290 Broadway
New York, NY 10007
877-251-4575

Acting Regional Administrator
Walter Mugdan
Mugdan.Walter@epa.gov

Acting Deputy Regional Administrator
Eric Schaaf
Schaaf.Eric@epa.gov

Acting Director, Emergency and Remedial Response
John Prince

Community Involvement Coordinator
Pat Seppi
212-637-3679
Seppi.Pat@epa.gov

Remedial Project Manager
Joe Gowers
212-637-4413
Gowers.Joe@epa.gov

New Jersey Department of Environmental Protection

401 East State Street
PO Box 4420, Mail Code 401-5R
Trenton, NJ 08625

Section Chief, Bureau of Site Management, Site Remediation Program
Ken Petrone
609-984-9755
Ken.Petrone@dep.nj.gov

Community Relations Coordinator
Mark Herzberg
609-633-1369
Mark.Herzberg@dep.nj.gov

Elected Officials

US Senator
Cory Booker
One Gateway Center, 23rd Floor
Newark, New Jersey 07102
973-639-8700

US Senator
Robert Menendez
One Gateway Center, Suite 110
Newark, New Jersey 07102
973-645-30304

US Congressional Representative, District 5
Josh Gottheimer
266 Harristown Road, Suite 104
PO Box 584
Ridgewood, NJ 07451
201-444-5454

State Legislative District 39

State Senator
Gerald Cardinale
350 Madison Avenue
Cresskill, NJ 07626
201-567-2324

General Assembly Representative
Holly Schepisi
287 Kinderkamack Road
Westwood, NJ 07675
201-666-0881

General Assembly Representative
Robert Auth
1069 Ringwood Avenue, Suite 312
Haskell, NJ 07420
862-248-0491

Site Information Repositories

Ringwood Library
30 Cannici Drive
Ringwood, New Jersey 07456

US EPA Region 2 Office
290 Broadway, 18th Floor
New York, New York 10007-1866

Websites

For information relating to Borough correspondence, actions and meetings:
http://www.ringwoodnj.net/content/3886/9451/default.aspx

Community Advisory Group website:
https://ringwoodsuperfund.wordpress.com

US EPA Ringwood Mines website:
https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0200663

Borough of Ringwood webpage for Ringwood Mines:
http://www.ringwoodnj.net/content/3886/9451/default.aspx

Media

The Record
www.northjersey.com

- 2005 Toxic Legacy series: http://toxiclegacy.northjersey.com/

- 2010 article *Toxic Legacy: Ford and the* Ramapoughs, December 10, 2010, including linkts to articles and videos posted between 2005 and 2010. http://archive.northjersey.com/story-archives/toxic-legacy-ford-and-the-ramapoughs-1.723269

Additional Resource Contacts

New York University Medical Center
Susan Cataldo, NYU Community Outreach Coordinator
845-731-3651

Appendix A: Community Conversations and References

PARTICIPANTS

Frank Dukes and Judie Talbot, with the University of Virginia's Institute for Environmental Negotiation, travelled to Ringwood on September 19, 2016 to meet with EPA Region 2 team members and see the site. After the site visit, and again on September 20, 2016 and September 29, 2016, IEN representatives spoke with a number of community members regarding in the Ringwood Mines community involvement process.

During each conversation, participants were asked to describe their involvement in the Ringwood Mines planning process and to share their perspectives about what worked well, what could be improved upon and how the process might move forward. The individuals who had extended conversations with IEN were:

Robin Canetti: CAG member, past Ringwood zoning board member

Rich Chapin: environmental engineer, past technical advisor for the CAG

Lisa Chiang: Ringwood CARES

Joe Gowers: EPA Region 2, Remedial Project Manager

Scott Heck: Ringwood Borough Manager

Mark Herzberg: NJDEP, Office of Community Relations

Ken Petrone: NJDEP, Section Chief

Doug Ruccione: Ringwood CARES

Pat Seppi: EPA Region, Community Liaison

John Speer: Mayor of Ringwood

Bob Spiegel: Edison Wetlands, CAG facilitator

Wenke Taule: CAG member, past Ringwood Council member and Mayor

Connie VanDunk: CAG member, Upper Ringwood resident

Ms. Judith Sullivan, associated with the Ramapough Conservancy and Ramapough Lunaape Indian Nation, also provided brief comments through informal communications.

An initial review of a working draft of the Community Involvement Plan took place via webinar and conference call on April 6, 2017. Comments from the meeting notes and proceedings informed revisions that were incorporated into the Draft CIP.

DOCUMENTS REFERENCED

Mayor and Council of the Borough of Ringwood. *Overview of Site Conditions and Feasible Remedial Action Alternatives for Protection of Human Health and the Environment at the Ringwood Mines/Landfill Superfund Site: Peters Mine Pit Area, O'Connor Disposal Area, and Cannon Mine Pit Area.* May 18, 2012.

New Jersey Department of Health and Human Services. *Public Health Assessment Ringwood Mines/Landfill Site.* 2006.

US EPA. Office of Inspector General. *Environmental Justice Concerns and Communication Problems Complicated Cleaning Up Ringwood Mines/Landfill Site.* April 2, 2007. Report 2007-P-00016.

US EPA. Office of Inspector General. *Limited Investigation Led to Missed Contamination at Ringwood Superfund Site.* September 25, 2007. Report 2007-P-00039.

US Public Health Service. Agency for Toxic Substances and Disease Registry. *Health Assessment for Ringwood Mines/Landfill National Priorities List (NPL) Site.* April 14, 1989.

US EPA. Region 2. *Explanation of Significant Differences: Ringwood Mines/Landfill Superfund Site.* April 2015.

US EPA. Region 2. *Record of Decision: Ringwood Mines/Landfill Superfund Site Operable Unit Two.* June 3, 2014.

US EPA. Region 2. *Unilateral Administrative Order for Remedial Investigation and Feasibility Study.* July 22, 2010.

Appendix B: Timeline of Key Dates

1965-1973	Ringwood Realty, a wholly-owned subsidiary of Ford Motor Company, owned all or part of the site during this time.
1967	O'Connor Trucking and Haulage started disposing of waste materials, from the Ford plant in Mahwah, at the Ringwood site. Waste materials included paint sludge, a hazardous material, and other industrial wastes. Given the political contexts of the time, many believe that waste hauling operations were run by organized crime interests.
1969	During a Borough Council meeting, the Borough of Ringwood became aware that a waste hauler was dumping wastes at the site.
April 1971	The Borough Board of Health ordered the waste hauler to cease dumping at the site.
1972-1976	The Borough of Ringwood operated a municipal landfill for household wastes.
1982	Site inspection by NJDEP shows levels of benzene, ethylbenzene and xylene in water samples from Peter Mine airshaft.
May 1983	EPA sent Ford an information request, asking about waste disposal activities at the site. Ford responded by identifying the three areas where waste haulers were directed to dump materials from the Ford Mahwah plant. Ford also indicated that it experienced poor performance issues with the waste hauler.
Sept. 1, 1983	**Site is listed on the National Priorities List (NPL)**, making the site eligible for Superfund cleanup. The lead agency for the investigation was NJCEP, with EPA becoming the lead agency once the site was listed.
March 1984	Ford enters into an Administrative Order on Consent (AOC) with EPA; this requires that a Remedial Investigation (RI) be completed to determine the nature and extent of contamination at the site.
1984-1988	Ford hires a contractor, who conducts the RI in a series of four phases.
1987	EPA issues Unilateral Orders (UAOs) to Ford requiring the removal and off-site disposal of paint sludge and associated soil. Ford is also required to conduct a Feasibility Study (FS) to evaluation potential cleanup options for any contamination remaining at the site.
1988	Removal of 7,000 cubic yards of surficial paint sludge and soil from a number of areas, including near the areas of Peters Mine Pit, Cannon Mine Pit and OCDA.
Sept. 1988	EPA issues Record of Decision (ROD) selecting a "no further action remedy" with long-term monitoring of surface water and groundwater. The ROD stated that the known areas of paint sludge had been removed from the site.
1989	Agency for Toxic Substances and Disease Registry (ATSDR) releases Health Assessment for Ringwood Mines, based on a review of the RI and without conducting a site visit. The finding of the report is that the site poses a potential public health concern due to risks that could result from possible exposure to hazardous substances – through ingestion or inhalation of contaminated soils or ingestion of contaminated groundwater – at levels that may result in long-term adverse health effects. The site was not considered for follow-up health studies.

1989	Paint sludge and drums found, resulting in the removal of 600 cubic yards of paint sludge and 54 drum remnants being in 1990.
1991	EPA officially identifies the Borough of Ringwood as a Potentially Responsible Party (PRP). This is due to the Borough acquiring the property, knowing that industrial wastes from the Ford Mahwah Plant had been disposed of at the site.
1993	Ford and the Borough entered into a Consent Decree, with each agreeing to pay EPA for certain costs that EPA had paid for.
1993-1998	Five-year Environmental Monitoring Program conducted with sampling of monitoring wells and potable wells, showing that groundwater contaminant levels had gone down after paint sludge was removed from the site.
1993	EPA publishes a *Notice of Intent of Deletion* from the NPL in the Federal Register. There is no record a notice being published in the local newspapers.
Nov. 1994	**EPA delists the site from the NPL, with concurrence from NJDEP.**
1995	Discovery/removal of an additional 5 cubic yards of paint sludge near Cannon Mine.
1998	Discovery of paint sludge in the OCDA area results in removal of additional 100 cubic yards of paint sludge.
1998	EPA conducts its first five-year review of the site. There are no records indicating that public notice was provided regarding the five-year review or the results.
2003	EPA issues addendum to the 1998 five-year review, with recommendation that the five-year review process be discontinued. There is no record of community notification requirements being satisfied.
2003	Based on a request from legal counsel for Upper Ringwood residents, ATSDR and NJ Department of Health and Human Services investigate whether past and current exposures to hazardous materials presented a public health hazard.
2004	Additional paint sludge identified during EPA site visit, which Ford voluntarily removed.
2005	EPA issues Ford an AOC and issues the Borough of Ringwood a Unilateral Administrative Order (UAO) requiring an additional RI and risk assessment for the site, including a thorough reinvestigation of the site.
2005	NJDEP negotiated access to investigate and remediate three residential properties.
Jan. 2006	Mass action lawsuit filed against Ford Motor Company.
April 2006	Draft New Jersey Public Health Assessment released for public comment. The assessment identified slightly higher blood lead levels in Upper Ringwood children. The incidence of cancer was not found to be higher than that found in Borough residents. Further efforts to investigate health effects were complicated by litigation against Ford by community members.
Sept. 2006	**Site relisted** as a result of significant amounts of additional paint sludge being found. EPA is the lead agency, with NJDEP serving as the support agency.

May 2010	Ford signs an AOC requiring an FS for the site disposal areas (Peters Mine Pit, Cannon Mine Pit and OCDA) and for site-related groundwater contamination.
Nov. 2010	Settlement checks dispersed from lawsuit.
2011 - 2013	Removal of 1,980 cubic yards of lead-contaminated soils from 23 residential properties
October 2011	Draft Feasibility Study released for Peters Mine Pit Area
April 2012	Draft Feasibility Study released for Cannon Mine Pit Area
May 2012	Draft Feasibility Study released for OCDA
May 18, 2012	The Borough submits its *Overview of Site Conditions and Feasible Remedial Action Alternative for Protection of Human Health and the Environment at the Ringwood Mines/Landfill Superfund Site: Peters Mine Pit Area, O'Connor Disposal Area, and Cannon Mine Pit Area* to EPA's National Remedy Review Board; its evaluation of the Alternative 4A (consolidation of fill with cap) references "any future use consistent with zoning and Borough planning for the area" without suggesting any specific future use (page 13)
Nov. 26, 2013	Revised Feasibility Report for OCDA released by Arcadis, technical consultant for Ford on Remedial Investigation/Feasibility Study; other correspondence submitted relating to future recycling center
Nov. 27, 2013	EPA review of Revised Feasibility Study
Nov. 30, 2013	The National Remedy Review Board (NRRB) issues comments on the Ringwood Mines/ Landfill Site; EPA submits responses to NRRB; proposed plan issued for the Ringwood Mines/Landfill site
June 2014	Record of Decision (ROD) issued with Contingency Plan
Dec. 24 2014	The date by which the Borough of Ringwood was required to submit the following items to EPA in support of the Contingency Plan: • Detailed engineering plans for the new recycling center • Financial assurances for covering construction costs • Documentation that the contingency remedy, including recycling center, will be completed within a timeframe comparable to that of the previously selected remedy The Borough submitted documents to EPA on December 19, 2014; EPA reviewed the materials and determined that the requirements were satisfied. Documentation included: 10 drawings providing detailed engineering plans, a $1.5 million commitment by Ford for completion of the recycling center, and a timeline comparison showing that the completion of the Contingency Remedy is estimated to take less time than what was required for the previously selected remedy.
April 15, 2015	Explanation of Significant Difference re: Contingency Plan Consent order issued to Ford, Borough declines to be a party

October 1, 2015	EPA issues an administrative order to Borough
November 2015	1, 4 Dioxane found in groundwater samples (Peters Mine)
Feb. 23, 2016	Local news article about discover of 1, 4 Dioxane
May 2016	Work on recycling plant suspended due to uncertainty about source of 1, 4 dioxane
July 1, 2016	Ordinance Proposal submitted to Borough of Ringwood Clerk
July 19, 2016	Council meetings
August 2, 2016	Council declines to enact proposed ordinance
Sept. 16, 2016	The motion brought forward by the Borough of Ringwood and Ford Motor Company, to prevent the petition from appearing on the November 2016 ballot, is heard in court
Sept. 19, 2016	Judge Caposela orders that the petition is not valid and may not be placed on the November 2016 ballot
October 2016	Appeal files by Ringwood CARES
November 2016	Appellate court returns appeal with instructions that the appeal is required to be submitted by an attorney
June 2017	CIP completed

Note: Since 2004, a total of 44,137 cubic yards of paint sludge and soil has been removed from 15 locations. Different documents use different measures for reporting the amount of contaminated materials and soils that have been removed. Cubic yards are reported in some cases, with tons reported elsewhere. To provide consistency, cubic yards are used in this document. For conversion purposes, one cubic yard represents approximately 0.825 ton. One ton represents roughly 1.21 cubic yards of material.

Appendix C: Technical Assistance Programs

There are several programs where a community can receive Technical Assistance from EPA. Descriptions of the TAG and TASC programs are provided below. This information is taken from the information sheet, "Technical Assistance for Communities" available online at https://www.epa.gov/superfund/technical-assistance-communities

Technical Assistance Grant (TAG) – Highlights

See also: https://www.epa.gov/superfund/technical-assistance-grant-tag-program

Eligibility:

- Available to community groups affected by sites on the National Priorities List (NPL), such as Ringwood Mines. (NOTE: Previously, Edison Wetlands applied for the TAG and managed the TAG funds.)
  - Community group members must be affected or potentially affected by actions at the site
  - The community group must incorporate as a non-profit organization for the purpose of decision-making at the Superfund site for which the TAG is awarded. (At the time of the grant award, the group must be incorporated or demonstrate that it has taken all the necessary and appropriate steps to do so.)
  - There are minimum administrative and record-keeping requirements for the community group, including: managing the grant, maintaining records, contracting and paying the technical advisor, sharing information with the community

What it is:

- A financial grant award to a community group to obtain independent technical experts to help interpret site-related technical information (reports, site conditions, cleanup actions).

What the money can be used for:

- Most, if not all, of the TAG funds awarded to the recipient community group must be used to procure a technical advisor.
- A small portion of the TAG funds may be used for administrative costs (such as developing newsletters, general supplies and procuring a grants administrator to manage the grant).

What the money cannot be used for:

- Travel expenses for group members
- Training expenses for group members
- Collecting new data, such as monitoring

Restrictions:

- Groups that represent or receive money or services from a Potentially Responsible Party are not eligible for a TAG. Also, financial support from academic institutions or governments disqualify a group from receiving a TAG.

Steps to apply for a TAG:

- Step 1: Your group writes a letter to EPA saying it is interested in a Technical Assistance Grant. This "letter of intent" needs to include the name of the Superfund site, and the group's contact person (including name, phone number, and address). EPA will send the contact person the TAG Application Package.
- Step 2: EPA informs the rest of the community that your group is interested in a TAG. Usually this is done by publishing a notice in the local newspaper. The notice explains that other groups interested in a TAG may contact your group and join with you, or submit their own Letter of Intent.
- Step 3: Other interested groups in your community then have 30 days to get in touch with your group to talk about working together to submit one application to EPA. If the groups do not want to work together, then other groups interested in applying for the TAG must write EPA their own Letter of Intent within this 30-day period.
- After the initial 30-day period, groups have another 30 days to submit the TAG application. If more than one application is received, the applications will be ranked.

Assistance available when applying for TAG:

- Staff members of the EPA grants program are available to provide help to all groups preparing TAG applications.
- EPA cannot provide funding to groups for hiring someone to fill out the TAG application.

Other key points:

- Community groups may be able to receive technical assistance through both a Technical Assistance Grant (TAG) and a Technical Assistance Services to Community (TASC) contract. The services received under the separate programs would need to be coordinated.
- Technical Assistance Grants typically require a 20% match (usually volunteer services). Sometime the match requirement can be waived or reduced.
- If a group incorporates just so that it can receive a TAG, and if a TAG is awarded to the community group, the costs of incorporation (such as filing fees, etc.) can be reimbursed through the TAG.
- Capacity building assistance is available for TAG recipients. TAG recipients can become members of organizations, both nonprofit and for-profit, that provide capacity-building assistance and required membership fees may be reimbursed by the TAG grant. TAG recipients should work closely with their Regional TAG Coordinators if interested in capacity-building assistance.

Technical Assistance Services for Communities (TASC) - Highlights

See also: https://www.epa.gov/superfund/technical-assistance-services-communities-tasc-program

Eligibility:

- Available to community groups affected by hazardous waste sites regulated by Superfund or RCRA (Resource Conservation and Recovery Act) programs.

What it is:

- The TASC program provides technical assistance services to a community through a national EPA contract. The services provided are unique to each community. Currently, the national TASC contractor is a company named Skeo Solutions.
- Community groups may be able to receive technical assistance through both a Technical Assistance Grant (TAG) and a Technical Assistance Services to Community (TASC) contract. The services received

Types of technical services that can be provided through a TASC contract?

- Review and interpret site-related technical information (reports, site conditions, cleanup actions)
- Community training
- Helping communities form Community Advisory Groups
- Facilitating community meetings
- Developing informational materials, making educational presentations

Who are the community technical advisors and how are they selected?

- The technical advisors and experts available through TASC are environmental engineers, scientists, public health specialists and community outreach professionals from private companies and universities.
- It is the responsibility of the TASC contractor to select an appropriate advisor. When choosing individuals to provide technical assistance, the TASC contractor consults with both EPA staff and community representatives to understand needs, concerns and requested areas of technical expertise. The TASC contractor then chooses from a pool of staff that includes in-house employees, a staff of subcontractors and individuals registered in the TASC contractor's technical expertise database. In cases where appropriate expertise cannot be identified from these sources, the TASC contractor will conduct a search that includes universities, federal agencies and other consulting firms to identify the best possible providers.

What if our community has questions or concerns about the services provided through TASC?

- Communities receiving TASC technical assistance services can contact EPA's Regional TASC Coordinator and the project's Technical Assistance Specialist to discuss project-related questions or concerns at any time. The TASC program's top priority is to provide responsive, high-quality technical assistance services that meet each community's needs. EPA will work with communities to rapidly and comprehensively address questions or concerns and ensure that program services are provided consistently and continuously.

The Regional TASC Coordinator for this Region (EPA Region 2) is:

Wanda Ayala

Phone: 212-637-3676

Email: ayala.wanda@epa.gov

Other Types of Technical Assistance

EPA provides other types of technical assistance, which are listed below. While these are not relevant for the Ringwood Mines site, readers of this CIP may come across them and wonder what they cover.

- Technical Assistance Plans: Arranging for technical assistance to communities affected by sites that are NOT on the National Priorities List. These plans are part of negotiated settlements with Potentially Responsible Parties.
- Partners in Technical Assistance Program: This provides opportunities for cooperation between EPA and colleges and universities, with the shared goal of assessing and addressing the unmet technical assistance needs of impacted communities near Superfund sites. Through this program, colleges and universities cooperate with EPA and voluntarily assist communities. No partnerships are currently active in Region 2, which encompasses New Jersey and New York.

Appendix D: Water Monitoring Program at Ringwood Mines Superfund Site

Overview

Water quality monitoring first occurred at the Ringwood Mines site in 1984. Over the years, the primary focus has been on groundwater with more sustained efforts. Surface water monitoring was more periodic. Since water quality monitoring was first initiated, various parties and consultants have conducted the water sampling at the site at various times. Generally, EPA or Ford were responsible for funding the sampling effort. At times, the samples were split for analysis by different labs. Also, the sampling program itself has varied over time.

Note: Water sampling locations are coded using the following acronyms:

- OB: overburden well
- SC: this designation is for an angled boring
- SD: sediment sample
- SR: seep removal
- SW: surface water
- RW: rock well

Location acronyms include the following:

- CM: Cannon Mine
- MRB: Mine Brook
- NOB: North Brook
- PAB: Park Brook
- PM: Peters Mine
- PMB: Peters Mine Brook
- PMP: Peters Mine Pit

Initial Investigation: 1984 - 1988

RI sampling involved seep water, upper aquifer groundwater, lower aquifer groundwater, surface water, and stream sediments. Samples were taken in four locations:

- Peters Mine (Area I in the 1988 ROD),
- St. Georges/Miller Keeler Pit (Area II in the 1988 ROD),
- Cannon Mine (Area III in the 1988 ROD), and the
- Inactive Borough Landfill (Area IV in the 1988 ROD)

Groundwater

The initial groundwater investigation involved the installation and sampling of 21 monitoring wells in 1984 and 1986. The wells ranged in depth from 14 feet to 543 feet, with 17 located in the upper aquifer and 4 in the lower aquifer.

Three rounds of water monitoring samples were taken during the initial Remedial Investigation: first round samples were collected during August and September of 1984, second round samples were collected during June 1986, and third round samples were collected in 1988.

Groundwater was tested for arsenic, cadmium, lead and benzene. Water samples were also tested for chromium, iron, manganese and zinc; however, as elements of magnetite (the substance that had been actively mined), the 1988 ROD considered these contaminants to be naturally occurring.

Surface Water

The initial groundwater investigation involved the installation and sampling of 21 monitoring wells. The wells ranged in depth from 14 feet to 543 feet, with 17 located in the upper aquifer and 4 in the lower aquifer.

Three rounds of surface water monitoring samples were taken during the initial RI: first round samples were collected on July 10, 1984; second round samples were collected April 3, 1985; and third round samples were collected on March 17, 1988. Sampling results are found in the 1988 ROD.

Surface water was tested for arsenic, barium, calcium, and Di-n-octylphathalate. Surface water samples were also tested for chromium, iron, and manganese which, as elements of magnetite (the substance that had been actively mined), the 1988 ROD considered to be naturally occurring.

Selected Remedy: 1988 ROD

The Selected Remedy contained in the 1988 ROD (page 10) called for:

> "Implementation of a long-term surface water and ground-water monitoring program to confirm that ground-water contamination in Area I [Peters Mine] meets health-based levels and to protect against future threats to the ground water and surface water throughout the Site."

Guidance on the water monitoring effort is as follows:

> "The monitoring network will include all potentially affected drinking water wells and surface water tributaries to the Wanaque Reservoir. Geophysical studies such as fracture-trace analyses and mapping of faults, folds, lineations and joints will be conducted to optimize the location and placement of long-term monitoring wells." Geochemical analysis of surrounding rocks and soils will be conducted in order to establish background concentrations of metals. After five years the monitoring program will be reevaluated to ensure that the ground water has reached health-based levels and the surface water is not impacting the Site. However, long-term monitoring for the entire Site should continue for a period of thirty years."

The initial Record of Decision (ROD, 1988) identified surface water and sediment sampling sites, as shown in Figure 3, next page (listed as Figure 2 in the 1988 ROD).

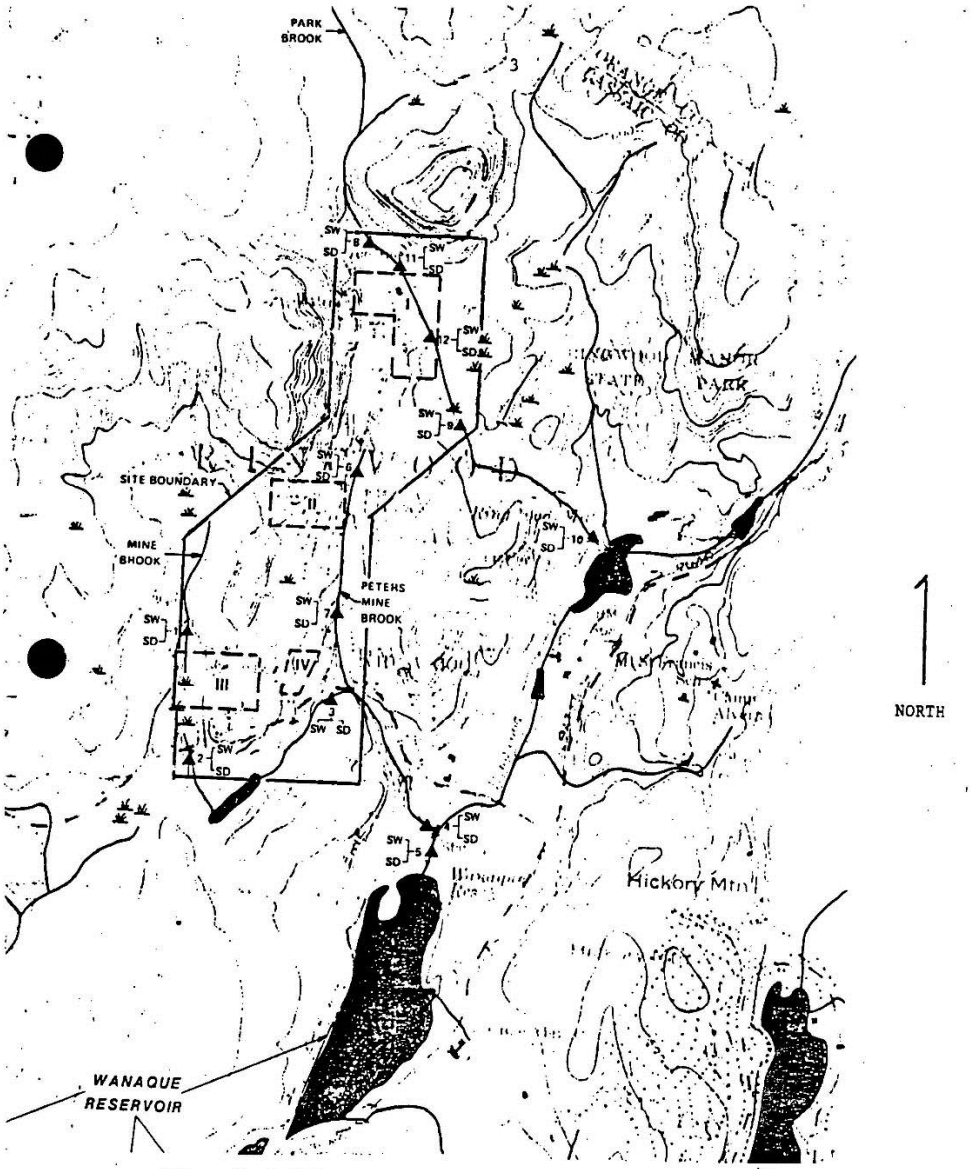

Figure 2 - RINGWOOD MINES/LANDFILL SITE DRAINAGE PATTERNS WITH SEDIMENT AND SURFACE WATER SAMPLE LOCATIONS

Figure 3: Surface Water and Sediment Monitoring Sites (1988 ROD)

1988 - 2004

Water monitoring records were not located for the time period from 1988 – 2005. The 2016 Water Sampling Report, by Cornerstone, provides Summary [Construction] Data for Monitoring Wells in Table 1 of the report. The summary indicates that three additional wells were installed in 1991 in the general vicinity of OCDA. In 1994, the Ringwood Mines site was removed from the National Priorities List. Periodic groundwater sampling was said to have occurred from 1990 – 1995 and again in 1999 and 2000. The current water monitoring program is reported as being established in 2005, including both groundwater and surface water elements.

2004 - Present

The 2016 Water Sampling Report, by Cornerstone, includes two tables showing historical and current results for: benzene; 1, 4-dioxane; chloroethane; arsenic; and lead.

- Table 13A reports groundwater results for these contaminants for the time from 2004 – 2016
- Table 13B reports results for water sampling done in Cannon and Peters mine shafts, covering sampling dates within the time period of 2008 – 2016

Sampling and analysis procedures for 2016 results are described on pages 3 and 4 of the cover letter for the 2016 Water Sampling Report. Additional information on container tracking, chain of custody, and descriptions of standard methods is provided in the respective reports associated with each sampling location.

A map of all water sampling locations is provided in Figure 1 in Attachment A of the 2016 Water Sampling Report. A copy is provided on the following page, formatted to an 11” x 17” sheet.

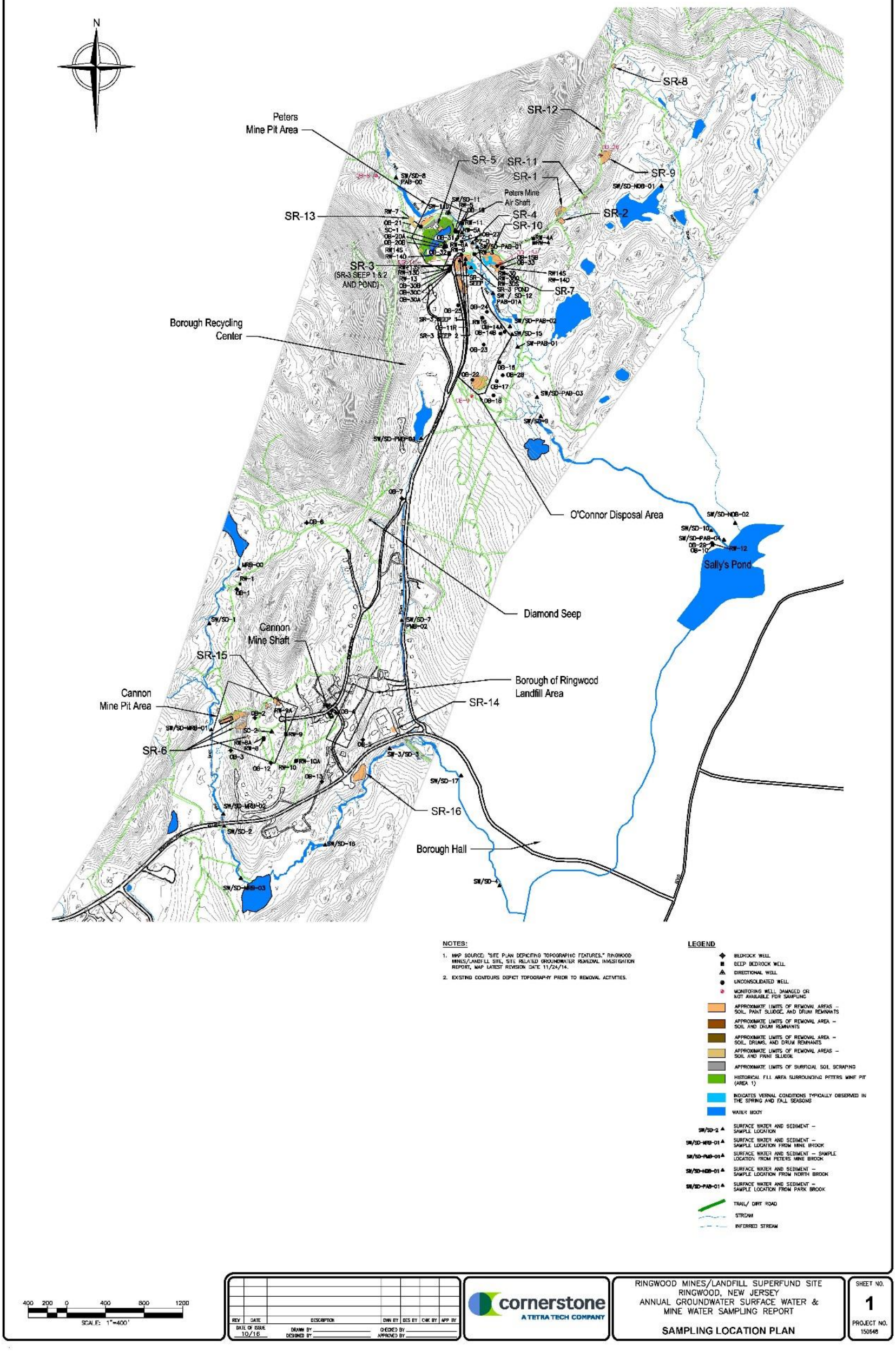

Figure 4: Water Monitoring Sites (2016 Water Sampling Report)