

Frequently Asked Questions
NIPSCO Bailly Generating Station
Chesterton, IN
Area C Statement of Basis

Answers to the following questions can be found below:

What is CCR?

What is the difference between Area C and SWMU 15?

Is all of Area C contaminated by the site?

Why was NIPSCO allowed to bury CCR in the ground during the 60's and 70's? Did they have a permit? Did regulations or our understanding of the science change?

Is boron the only contaminant that was found? What risk does boron, or any other contaminants, pose?

Why isn't SWMU 14 going to be remediated?

How can contamination be present but not pose a risk to either people or the environment?

Where will the excavated CCR be disposed of?

Is any contamination from NIPSCO getting into Lake Michigan?

The Indiana Dunes is now a National Park, did EPA take the sensitivity of the land and species into consideration? Were any threatened or endangered species considered?

When would this work start and how long will it last?

How much truck traffic will the excavation portion of the cleanup require? What will the truck route be?

Is SWMU 15 or SWMU 14 subject to EPA's 2015 CCR Rule?

What will SWMU 15 look like when the work is complete?

Will there be long-term monitoring? Will there be a contingency plan if the groundwater does not improve?

What is the estimated cost of this cleanup and who pays for it?

How will air quality be protected or monitored during the excavation of the CCR?

Is NIPSCO permanently closing the coal fired power plant?

Will there be any environmental consequences to leaving the stabilized CCR in place? How long will the solidified mass last?

Will the cleanup impact any visitor activities at the National Park?

Will NIPSCO be monitoring the remedy and for how long?

Are Areas A and B already cleaned up?

Who should I contact if I have questions on activities taking place at the site?

Q: What is CCR?

A: CCR stands for coal combustion residuals, or coal ash. CCR is the ash that is created when coal is burned, just as there is ash created from the burning of wood. The type of contamination found in CCR depends upon the make-up of the coal that was burned; however, all CCR contains some combination of metals. When CCR isn't disposed of properly, those metals can contaminate the environment.

Visit EPA's coal ash website for more information: www.epa.gov/coalash.

Q: What is the difference between Area C and SWMU 15?

A: "Area C" broadly designated a large area to be evaluated during the investigation. Area C contains the "solid waste management units" or "SWMUs" located on-site. SWMUs are defined as areas where waste has been placed and they may or may not be contaminated. Area C also includes a very large off-site area to ensure that the investigation would identify any contamination from the facility that is present in the National Park. See Statement of Basis Figure 3.

Q: Is all of Area C contaminated by the site?

A: No. EPA wanted to be sure the Area C investigation included all the places where the contamination may have migrated. Consequently, Area C was drawn to include both the on-site SWMUs and a very large off-site area that included a lot of National Park property. The Area C investigation then identified areas that had been contaminated through sampling. The investigation found contamination in the on-site SWMUs as well as contamination that had migrated into some off-site areas in the National Park property directly adjacent to those SWMUs. See Statement of Basis Figure 2.

Q: Why was NIPSCO allowed to bury CCR in the ground during the 60's and 70's? Did they have a permit? Did regulations or our understanding of the science change?

A: At the time NIPSCO used portions of their property to dispose of CCR, CCR was not regulated, was not considered a toxic or hazardous waste and there was no permit requirement to do so. The hazardous waste that NIPSCO generated was from the cleaning chemicals used on the boiler, the unit that burned the coal. This material was not disposed of on site and was properly managed for offsite disposal under RCRA. CCR is regulated as a solid waste, it has never been regulated as hazardous waste. In 1980, Congress exempted coal combustion residuals from regulation under the hazardous waste requirements until EPA completed a study to assess risks and make a regulatory determination. After studying CCR, EPA made two separate regulatory determinations (in 1993 and in 2000) to exclude CCR from hazardous waste regulation under Subtitle C of RCRA and instead regulate them under the non-hazardous waste regulations under Subtitle D. The most recent CCR Rule, published in 2015, continues to regulate CCR as a non-hazardous solid waste. However, this rule now establishes a comprehensive set of requirements for the safe disposal of CCR. Both the regulations and the understanding of the science of CCR have evolved over time. See below for a timeline of NIPSCO's disposal history in relation to CCR regulatory history (see also, EPA's CCR regulatory history website at: <https://www.epa.gov/coalash/legislative-and-regulatory-timeline-fossil-fuel-combustion-wastes>). CCR will no longer be generated or managed at this facility since closing in 2018.

Q: Is boron the only contaminant that was found? What risk does boron, or any other contaminants, pose?

A: No, boron was not the only contaminant that was found. Section III of the Statement of Basis describes all contaminants identified during the investigation. Of all the contaminants investigated, boron demonstrated the highest risk to receptors. In particular, at elevated concentrations, boron may become toxic to plants. Since the National Park has an abundance of sensitive, threatened or endangered plant species, boron poses an unacceptable risk. Other metal contaminants associated with coal ash were found in the groundwater in the same approximate area where boron was found. Those metals included: aluminum, arsenic, molybdenum and selenium. Further evaluation was performed for the soil, sediment and surface water where the groundwater reaches ground surface and forms wetlands. Potential risks were found to exist from these metals to a variety of receptors, such as the small organisms that live in the wet soils of wetlands. However, due to the contaminant levels being low and the ecological risk assessment process containing inherent uncertainties, boron was the contaminant that proved to demonstrate the most unacceptable risk and is considered the “risk driver” for the cleanup. Other metals demonstrated some, but potentially not as much, risk. The outcome of eliminating the SWMU 15 source and performing monitored natural attenuation will address all the metals, not just boron.

Q: Why isn't SWMU 14 going to be remediated?

A: SWMU 14 is also an area where NIPSCO disposed of coal ash during the 60's and 70's. The unit is less than 4 acres and the ash was never placed at or below the water table; therefore, unlike SWMU 15, the ash is not sitting in groundwater. SWMU 14 was investigated and a risk assessment performed. Although ash is not submerged in groundwater, rain can still infiltrate from the ground surface and move down through SWMU 14. EPA was concerned that the infiltration of that rainwater could pick up contamination and move it into the National Park in groundwater. The downgradient area adjacent to SWMU 14 was sampled with this scenario in mind. Boron and molybdenum were found above levels that are typical in the area, known as “background” concentrations; however, those levels were not above the conservative Great Lakes Initiative (GLI) screening levels. The groundwater that is downgradient of SWMU 14 does not pose a risk to the park. Since the RCRA Corrective Action program is a risk-based program, EPA cannot compel a company to cleanup an area that does not pose a risk to either human health or the environment.

Q: How can contamination be present but not pose a risk to either people or the environment?

A: “Contamination” can refer to man-made chemicals or naturally occurring elements. We use a variety of chemicals in our lives daily in products such as cleaning supplies, garden and lawn products, and even personal care products. However, when those chemicals or products are not used in the correct way or disposed of properly, they could become “contamination”. Contamination can also be thought of as elements or chemicals in quantities, concentrations or locations that may be problematic. The evaluation of contamination takes into consideration the amount (quantity or volume), the type (specific chemicals), the toxicity (the effects from that chemical), and the exposure (who is contacting it and for how long). The risk of any given contamination is a function of its toxicity and exposure. So, it is possible that “contamination” may be present at a site, but it may be there in low enough levels to not cause adverse health effects or there isn't a complete pathway between the ‘contamination” and the receptor. Meaning the “contamination” does not come in contact with the person, animal or plant being evaluated as part of the risk assessment. In those cases, the contamination can still be present, but the risk assessment process has concluded that it does not pose a risk to people or the environment. Section IV of the Statement of Basis discusses the risk assessments.

Q: Where will the excavated CCR be disposed of?

A: The exact permitted, solid waste landfill where the CCR will be disposed of has not yet been identified. NIPSCO will assess disposal options as part of the cleanup's bidding process. As part of that evaluation, NIPSCO will be assessing their own NIPSCO Schahfer Generating Facility's disposal unit as an option.

Q: Is any contamination from NIPSCO getting into Lake Michigan?

A: No. Samples of groundwater at the locations where groundwater enters the lake were collected in both Areas A and C. Contamination was not found to be moving from the site into the lake. The groundwater plumes at the NIPSCO site are not highly mobile, meaning they don't move very quickly or very far. Groundwater that is contaminated with metals can be inhibited from moving by several factors. The movement of metals in groundwater is controlled by the nature of the source, the chemistry of the metal, and the mineralogy of the groundwater and surrounding soils. For the same reason monitored natural attenuation is proposed, the natural attenuation processes occurring, some metals are not able to migrate very far in groundwater. Due to the chemistry and geology, the metal becomes bound to and mineralized into the soil itself.

Q: The Indiana Dunes is now a National Park, did EPA take the sensitivity of the land and species into consideration? Were any threatened or endangered species considered?

A: Yes, EPA made investigation, risk assessment and proposed cleanup decisions based almost solely on the National Park's sensitive status. EPA collaborated with the National Park Service and scientists at the dunes. The investigation was designed to evaluate all potentially contaminated environmental media (water, soil, sediment), the plants and animals in contact with that media, and other species within the food chain. Studies were conducted directly on the National Park plants as well as the amphibians because they are especially sensitive receptors. The risk assessment evaluation conducted by EPA (see Statement of Basis Attachment C) used highly conservative assumptions because of the special status of the National Park.

As part of the investigation and risk assessment, EPA evaluated potential risks to the Piping plover. The Piping plover is a small shorebird that spends the spring and summer in the United States and migrates south for the winter. In the Great Lakes area, the Piping plover is an endangered species. Endangered species are animals and plants that are in danger of becoming extinct. Sampling was conducted in the area where the plover might nest and feed, near the lake. Based on the sampling conducted, the risk assessment concluded there was no adverse risk to the plover.

Q: When would this work start and how long will it last?

A: The exact start date depends on several prior steps. EPA must first receive and consider all public comments and incorporate our responses to the Final Decision/Response to Comments document. Then, NIPSCO will complete a "pilot study" at SWMU 15 to gather specific pieces of information needed to fully execute the remedy. It's estimated the remedy could be implemented in 2021 and will take 12 months over two construction seasons.

Q: How much truck traffic will the excavation portion of the cleanup require? What will the truck route be?

A: According to the constructability evaluation (Appendix N in the 2019 Final CMS Report) it is estimated that a maximum of 58 trucks per day would be feasible given access to local highways; however, the selected landfill has not been decided. If NIPSCO's Schahfer landfill could accommodate the CCR, then the shortest route would be to exit Bailly and turn left onto Route 12 travelling east to get onto Route 49 south. This section of Route 12 passes north of (although not directly adjacent to) residential areas that are up on the moraine. The alternative route to Schahfer would be to turn right out of Bailly onto Route 12 west, to Route 249, which leads to either Route 94 east or Route 80 east, which leads back to Route 49 south to Schahfer. For commercial disposal facilities south and west of Bailly the trucks would likely travel to Routes 94 or 80 as described above. Please see the map below for orientation. The facility is marked with a star.

Q: Is SWMU 15 or SWMU 14 subject to EPA's 2015 CCR Rule?

A: No. CCR landfills that are "active" (receiving CCR) are subject to the CCR Rule. CCR landfills that do not receive any CCR on or after the effective date of the rule (October 19, 2015) are considered "inactive" and are not subject to the requirements of the final CCR rule.

Q: What will SWMU 15 look like when the work is complete?

A: It is anticipated that SWMU 15 will be at a lower elevation once the cleanup is completed compared to its current elevation. This will result in a more natural, continuous look with the adjacent National Park property. There will be a restoration plan associated with the forthcoming Corrective Measures Implementation Work Plan that NIPSCO will submit to EPA. EPA will consult with the National Park Service on this restoration plan. The final grading and vegetation for the site will be designed to limit precipitation infiltration by encouraging storm water management.

Q: Will there be long-term monitoring? Will there be a contingency plan if the groundwater does not improve?

A: Yes, there will be long-term monitoring and a contingency plan. A minimum of 5 years of Monitored Natural Attenuation monitoring will be completed before considering a contingency plan. The contingency plan will be designed in consultation with the National Park Service. The forthcoming Corrective Measures Implementation Work Plan will include a decision logic for the evaluation of the source control efficacy before engaging in a contingency plan. Long-term monitoring is projected to take place for 30 years.

Q: What is the estimated cost of this cleanup and who pays for it?

A: The estimated cost for all the work proposed in Area C is about \$22 million. The work at SWMU 15 accounts for \$20 million of that cost. NIPSCO will pay for the cleanup directly. The EPA RCRA Corrective Action program cannot, by law, use tax-payer dollars on any investigation or cleanup. EPA oversees the responsible party and makes sure the work is completed in accordance with EPA policy and guidance.

Q: How will air quality be protected or monitored during the excavation of the CCR?

A: Dust suppression will take place during construction by spraying water on the material as it's excavated. This measure will be required by the Health & Safety Plan NIPSCO will develop. It is expected that the CCR will be fairly moist even above the water table due to the height of the capillary fringe for the fine-

grained nature of ash. According to the Geotechnical Report (Appendix F to the 2019 Final CMS Report), moisture content of the CCR ranges from 90.7 to 100+% for the 10 samples measured, most if not all having come from the capillary fringe or below the water table. Trucks will be covered during transit and dust monitoring will be required by the Health & Safety Plan.

Q: Is NIPSCO permanently closing the coal fired power plant?

A: Yes. NIPSCO closed the Bailly facility in 2018.

Q: Will there be any environmental consequences to leaving the stabilized CCR in place? How long will the solidified mass last?

A: The intended environmental consequence of turning the CCR into a solid mass is to significantly reduce the permeability of the CCR. Meaning, surrounding groundwater will no longer be able to flow through the CCR, pick up metals and carry them into the National Park. The groundwater will encounter the solid mass and move around it. Solidification/stabilization works to both bind the material into a solid mass and “fix” the contaminants in place chemically. ISS has been used for over 30 years in the environmental industry with reliability of the long-term effectiveness. According to the Interstate Technology & Regulatory Council (ITRC: www.itrcweb.org), ISS has proven to be effective over long periods of time and has been evaluated through several research studies. A research group led by the University of Greenwich, the University of New Hampshire, and INERTEC (France) conducted a study of 10 ISS remedies to assess their long-term effectiveness. The remedies had been implemented between 1989 and 2006. The study concluded that all the sites were still performing well and meeting their remediation goals, even after multiple decades. The ITRC also acknowledges, for comparison, that disposal of radioactive material often relies on a cement-based solidification due to its permanence.

EPA is concerned about the long-term effectiveness of any remedy that leaves contamination in place. Therefore, our program has a “long-term stewardship” component to the proposed remedy and plans for at least 30 years of monitoring.

Q: Will the cleanup impact any visitor activities at the National Park?

A: It is possible the construction at SWMU 15 will impact access to the trail immediately adjacent to the unit. That would be a segment of the Cowles Bog Trail. EPA and NIPSCO will coordinate with the National Park Service on the construction plans and determine how best to address the nearby trail.

Q: Will NIPSCO be monitoring the remedy and for how long?

A: NIPSCO will be monitoring the remedy for at least 30 years. A “long-term stewardship” plan will be required, and that plan will establish the details of monitoring the site into the future.

Q: Are Areas A and B already cleaned up?

A: Yes. Areas A and B were cleaned up under the Corrective Action program in accordance with a 2012 Final Decision/Response to Comments. The closure of the facility and the CCR ponds in Area B will be under the oversight of the State of Indiana, Indiana Department of Environmental Management (IDEM).

Q: Who should I contact if I have questions on activities taking place at the site?

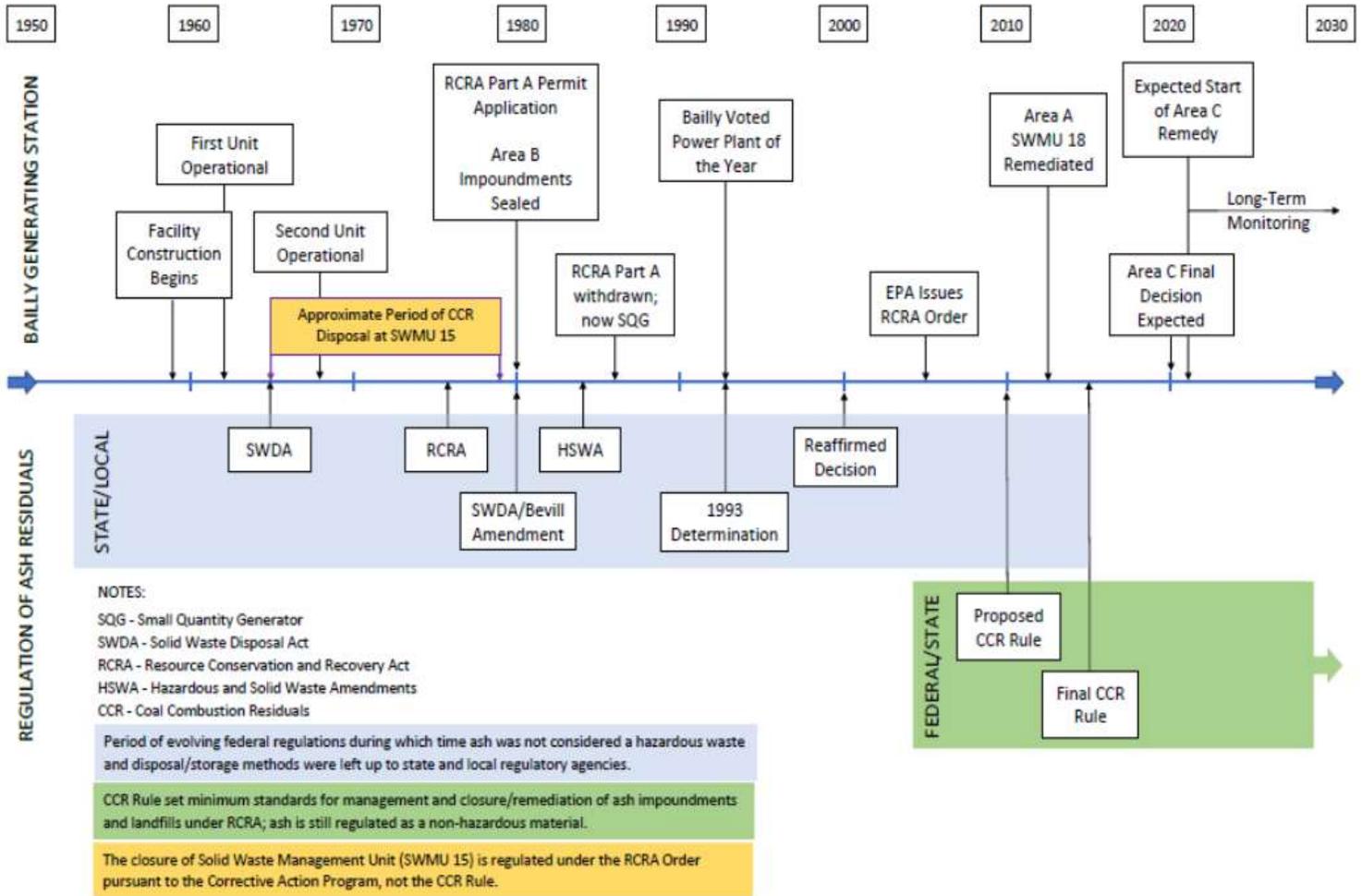
A: You can contact the EPA Project Manager, Michelle Kaysen, or the NIPSCO Project Manager, Dan Sullivan. You can also contact EPA's Community Involvement Coordinator, Kirstin Safakas.

Michelle Kaysen
EPA Project Manager
RCRA Corrective Action Program
(312) 886-4253 office
(815) 207-3269 cell
kaysen.michelle@epa.gov

Dan Sullivan
NIPSCO Project Manager
NiSource Environmental Remediation
(219) 647-5248
DSullivan@NiSource.com

Kirstin Safakas
EPA Community Involvement Coordinator
External Communications Office
(312) 886-6015 office
(312) 919-4621 cell

Timeline of NIPSCO Disposal History and CCR Regulatory History



NIPSCO Bailly Nearby Highways Available for Possible Truck Routes

