



Welcome!

**Nine Mile Point Generating Station
2015 Annual Assessment Public Meeting
Chamber of Commerce May 2016 Meeting
Nuclear Regulatory Commission – Region I**

Today's NRC Representatives



Anthony Dimitriadis
Branch Chief, King of Prussia, PA

Ken Kolaczyk
Senior Resident Inspector



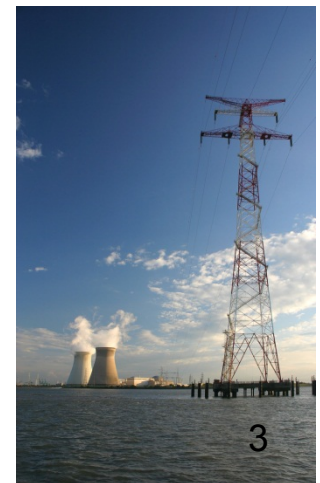
Eric Miller
Resident Inspector

Greg Stock
Resident Inspector



- Electricity What is it How is it Made - Video
- Electricity Producers Oswego County
- NRC Mission
- Nine Mile Station Performance in 2015
- Questions and Answers

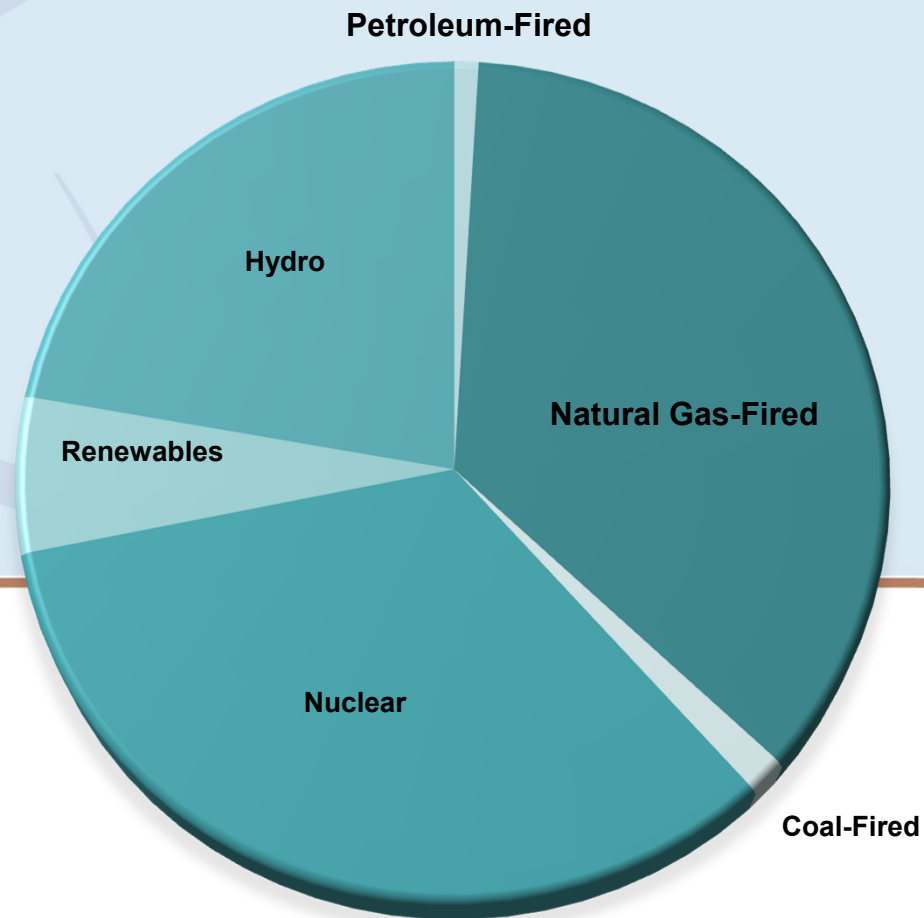
Agenda



Video

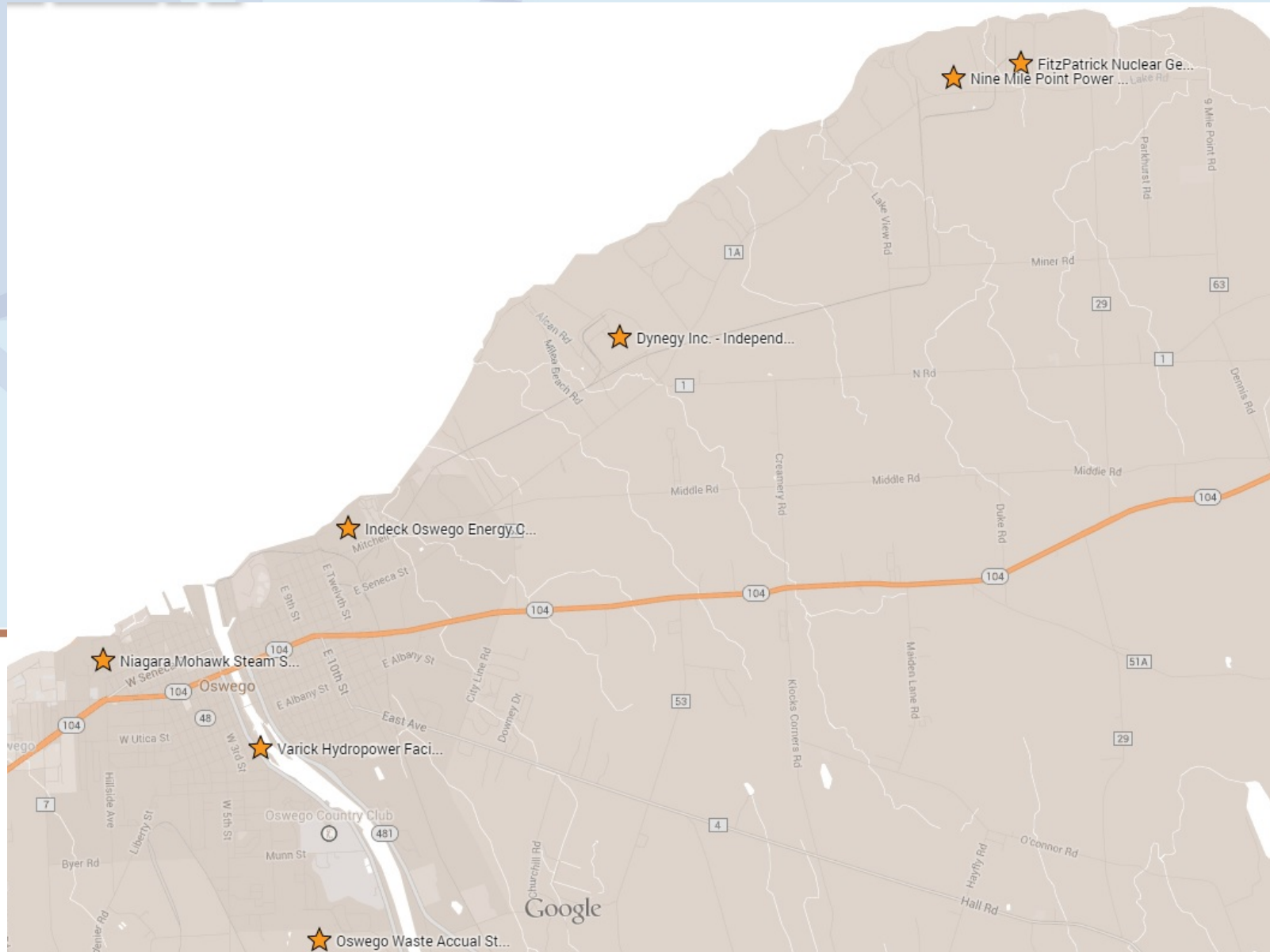
How is electricity made?

NY State Electricity Generation by Source January 2016



Petroleum-Fired	0.9%
Natural Gas-Fired	36.0%
Coal-Fired	1.4%
Nuclear	33.5%
Other Renewables	6.0%
Hydroelectric	22.2%

Source: U.S. Energy Information Administration



Oswego County = Energy

How Much Energy?

1MW= 1,000 homes

- Nine Mile Station – 1,761MW
 - Oswego Steam Station – 1,700MW
 - Independence Station - 1,036MW
 - Fitzpatrick – 838MW
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- IDC Cogeneration – 51MW
 - Oswego River Hydro Stations – 8MW
 - Fulton Resource Station – 3.6MW

Fossil Fueled- Large



Fossil Fueled- Small



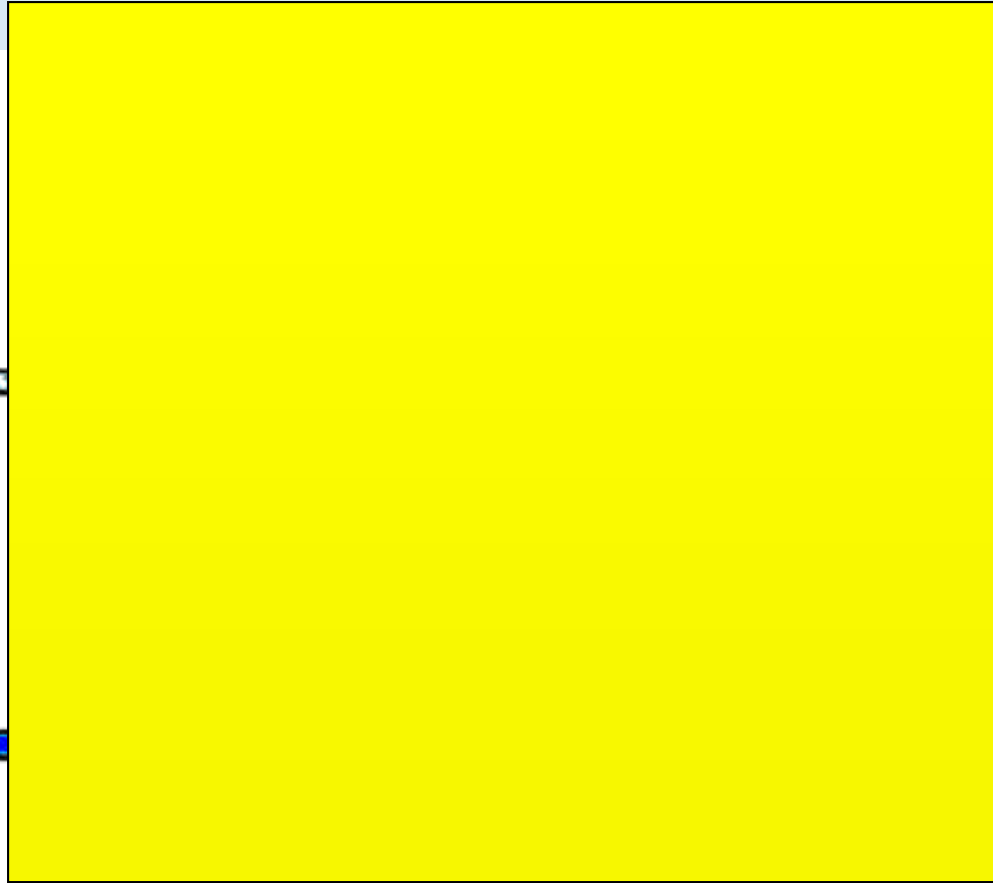
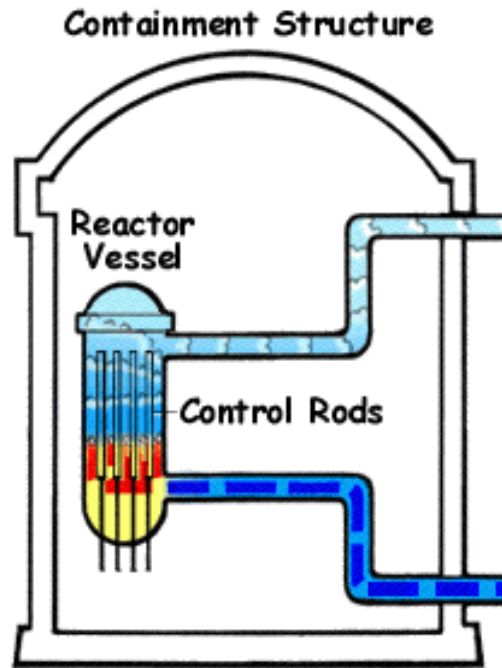
Water Power



Nuclear



BWR Power Generation



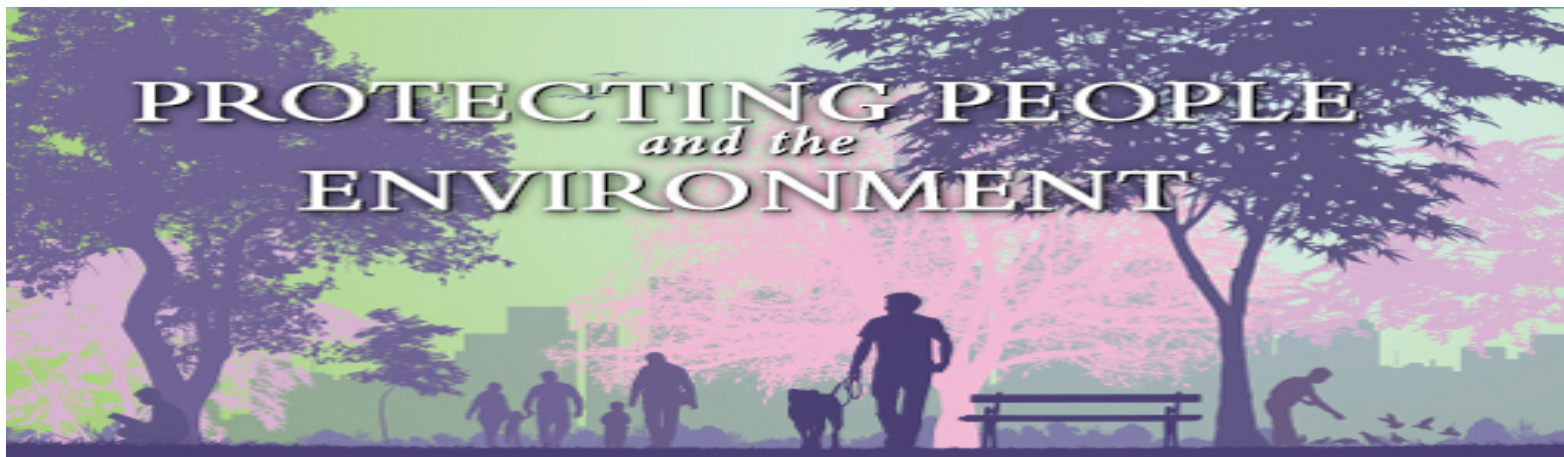
Some Nuclear Facts

- Nuclear power plants supply about 20 percent of the electricity in the U.S.
- Nuclear materials are used in medicine for cancer treatment and diagnosis.
- Nuclear materials are widely used in industry, such as in density gauges, radiography devices, irradiators and smoke detectors.



Some Radiation Facts

- Radiation occurs naturally in the soil, air and water.
- The average person in the U.S. is exposed to about 360 millirem a year – 82 percent from natural sources (also called background radiation) and about 55 millirem from medical exams.
- Small amounts of radioactive material are used in such common items as smoke detectors, exit signs and some watches.



So what is the NRC?



Who We Are

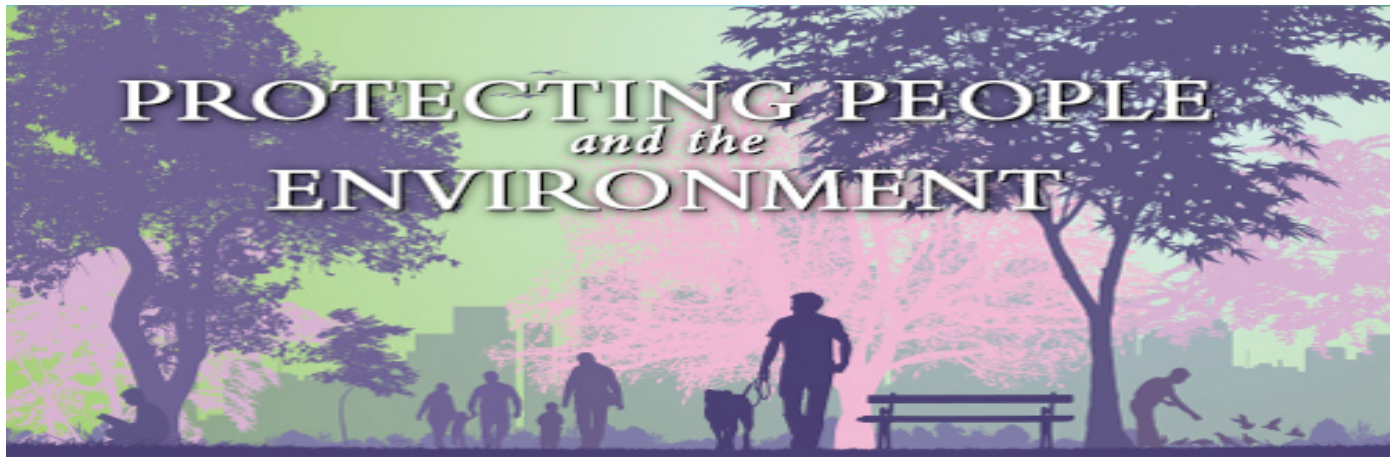
- The Energy Reorganization Act of 1974 established the independent U.S. NRC to regulate commercial uses of nuclear material; other duties of the former Atomic Energy Commission were assigned to DOE.
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- The NRC is headed by four Commissioners and a Chairman, all appointed by the President and confirmed by the Senate for staggered five-year terms. No more than three can be from the same political party.

Who We Are

- The NRC employs about 3,600 people in its suburban Maryland headquarters and four regional offices in the Philadelphia, Atlanta, Chicago and Dallas metro areas.
- NRC inspectors are assigned to 65 nuclear power plant sites and three fuel facilities.
- NRC staff are federal employees qualified to hold positions of public trust. They are bound by stringent ethics rules and restrictions.

Our Mission

To license and regulate the nation's civilian use of byproduct, source and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.



Our Goals

- **Safety:** Ensure the protection of public health and safety and the environment.
 - **Security:** Ensure the secure use and management of radioactive material.
 - **Effectiveness:** Ensure our actions are effective, efficient, realistic and timely.
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- **Management:** Ensure excellence in agency management.
 - **Openness:** Ensure openness in our regulatory process. *That is why we are here today!*

What We Don't Do

- Regulate nuclear weapons, military reactors or space vehicle reactors. (These are regulated by other federal agencies.)
- Regulate naturally occurring radon, X-rays and material produced in particle accelerators. (These are regulated by states or other federal agencies.)
- Own or operate nuclear power plants.



What We Do: The NRC Regulates:

- Nuclear reactors - commercial power reactors, research and test reactors, new reactor designs
- Nuclear materials - nuclear reactor fuel, radioactive materials for medical, industrial and academic use
- Nuclear waste – transportation, storage and disposal of nuclear material and waste, decommissioning of nuclear facilities
- Nuclear security – physical security of nuclear facilities and materials from sabotage or attacks



Our Primary Functions

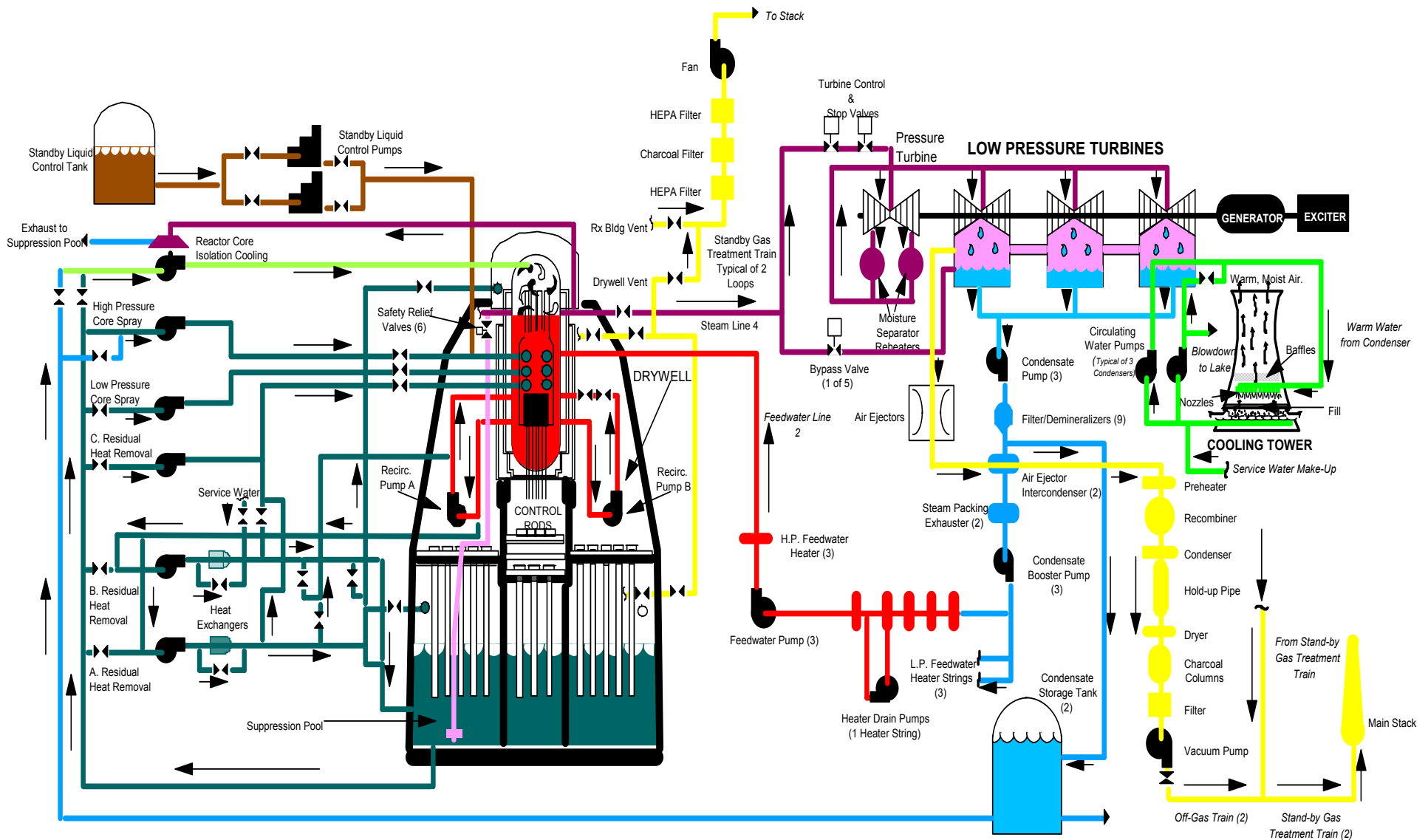
- Establish rules and regulations
- Issue licenses
- Provide oversight through inspection, enforcement and evaluation of operational experience
- Conduct research to provide support for regulatory decisions.
- Respond to emergencies



What We Do: Reactors

- The NRC ensures nuclear plant safety by requiring a “defense-in-depth” design philosophy that includes:
 - Multiple, redundant and independent safety systems;
 - Multiple physical barriers, including robust reactor containment that prevents the release of radioactivity; and
 - Testing of emergency plans.

Nine Mile Point Nuclear Station Unit 2



What We Do: Reactors

- The NRC ensures nuclear plant safety by verifying compliance with regulations.
 - Each nuclear power plant site has at least two NRC resident inspectors onsite to perform daily inspections.
 - Special inspectors also perform periodic inspections.
 - Licensees are required to report plant safety data and events to the NRC.

What We Do: Reactors

- The NRC also ensures nuclear plant safety by:
 - Requiring long-term maintenance to assure equipment is repaired or replaced in a timely manner; and
 - Requiring continual training and qualification of nuclear plant operators.



What We Do: Materials

- The NRC protects public health, national security and the environment by regulating:
 - Medical and industrial use of nuclear materials (about 21,650 licenses issued and inspected by the NRC and Agreement States).



What We Do: Materials

- The NRC also regulates:
 - Uranium milling and in situ or solution mining facilities (about 18 facilities, mostly in the Midwest);
 - Uranium conversion, enrichment and fuel fabrication facilities (a total of nine); and
 - Uranium enrichment plants (only one exists in the U.S; other applications are under review).



What We Do: Waste

- NRC's ensures public safety through the licensing of nuclear waste, including:
 - A high-level radioactive waste repository proposed at Yucca Mountain, Nev., by the DOE.
 - Spent fuel storage installations for the interim storage of spent nuclear reactor fuel in fuel pools or dry storage casks.
 - About 50,000 metric tons stored at reactor sites.
 - Twenty-seven spent fuel storage sites.

What We Do: Waste

- The NRC also certifies:
 - Spent fuel storage and transportation cask designs; and
 - Transportation packages for nuclear materials and waste.



What We Do: Security

- To ensure nuclear plants are as secure as they are safe, the NRC requires such measures as:
 - Well-armed and well-trained security forces;
 - Surveillance and perimeter patrols;
 - State-of-the-art site access equipment and controls;
 - Physical barriers and detection zones; and
 - Intrusion detection systems and alarm stations.

What We Do: Security

- The NRC Operations Center is staffed 24 hours a day to monitor events and initiate response activities.
- The NRC responds to Incidents of National Security under the National Response Plan, coordinating with federal, state and local first responders.
- The NRC conducts regular exercises to test licensee emergency response capabilities and uses mock adversaries to test security guard response.



Partners in Regulation

- The NRC works with many other agencies and organizations including:
 - Department of Energy
 - Environmental Protection Agency
 - Department of Homeland Security
 - FBI
 - Department of Health and Human Services
 - Congress
 - International Atomic Energy Agency
 - Nuclear Energy Institute

So What About The Nine Mile Station?



Action Matrix

Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple/Repetitive Degraded Cornerstone	Unacceptable Performance
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Increasing:

- *Safety Significance*
- *Inspection*
- *Management Involvement*
- *Regulatory Action*

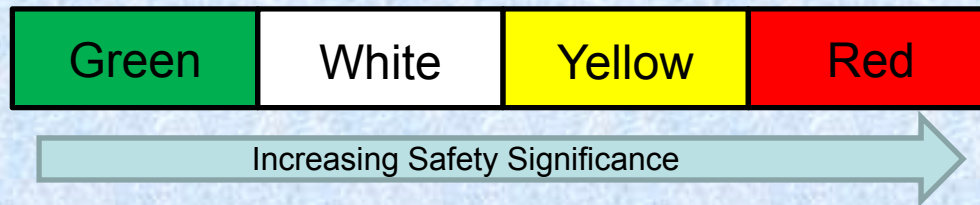
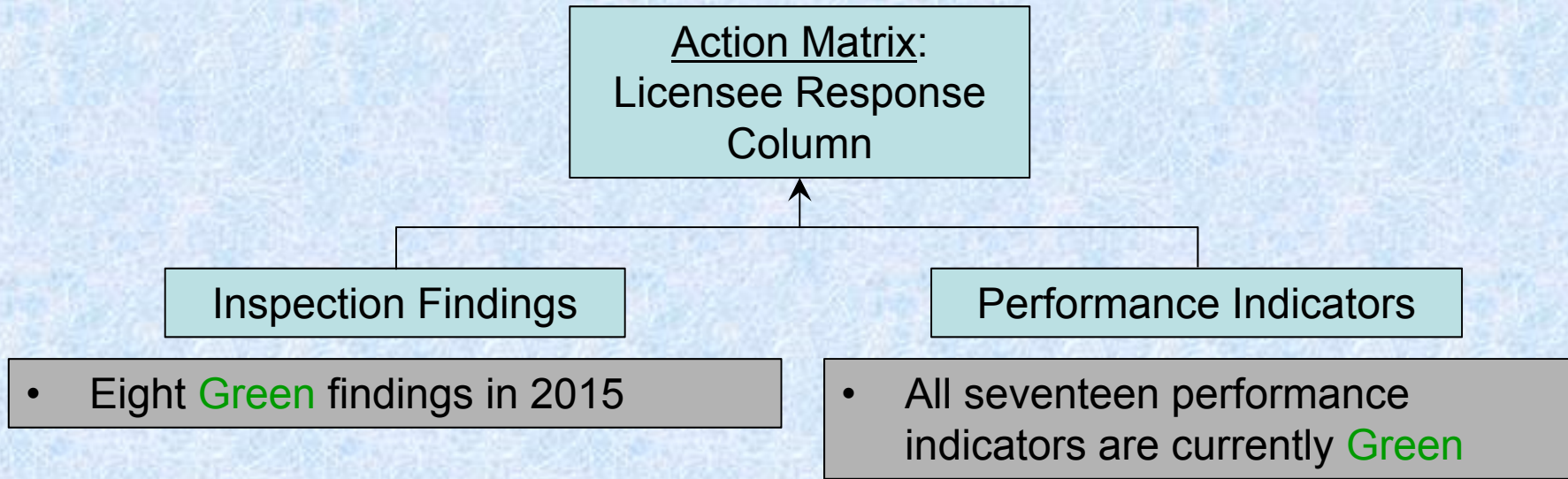
Assessment Summary

The Nine Mile Station is in the Licensee Response Column of the NRC's Reactor Oversight Process Action Matrix

How Did We Reach This Conclusion?

- Assessment Meeting Held
 - NRC Managers
 - Inspectors
 - Conclusion Based Upon
 - Performance Indicators
 - Inspection Activities
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Assessment Summary (cont.):



- 6,700 hours of inspection and related activities
- Three Resident Inspectors on site – residents issue four quarterly inspection reports per year and walk through the plant every day

NRC Inspection Activities at Nine Mile Point in 2015



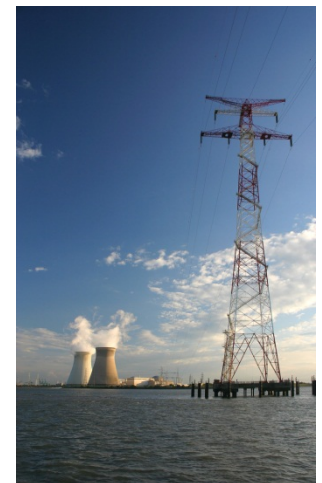
- 12 regional inspections
 - Security
 - Health Physics
 - Spent Fuel Storage
- Two team inspection
 - Problem Identification and Resolution
 - Fire Protection

NRC Inspection Activities at Nine Mile Point in 2015



So What Is The NRC Doing At NMP In 2016?

- Modification Inspection- Three Inspectors
- Security Inspections- Three Inspectors
- Licensed Operator Examinations



Exelon operated the Nine Mile Station in a manner that preserved the public health and safety and protected the environment.

2015 Annual Assessment Summary



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2015 Annual Assessment Summary





Questions and Answers