

Northrop Grumman Site

Site No. 130003A

Proposed Remedial Action Plan

Operable Unit 3 (OU3)

Former Grumman Settling Ponds

June 2012



Agenda

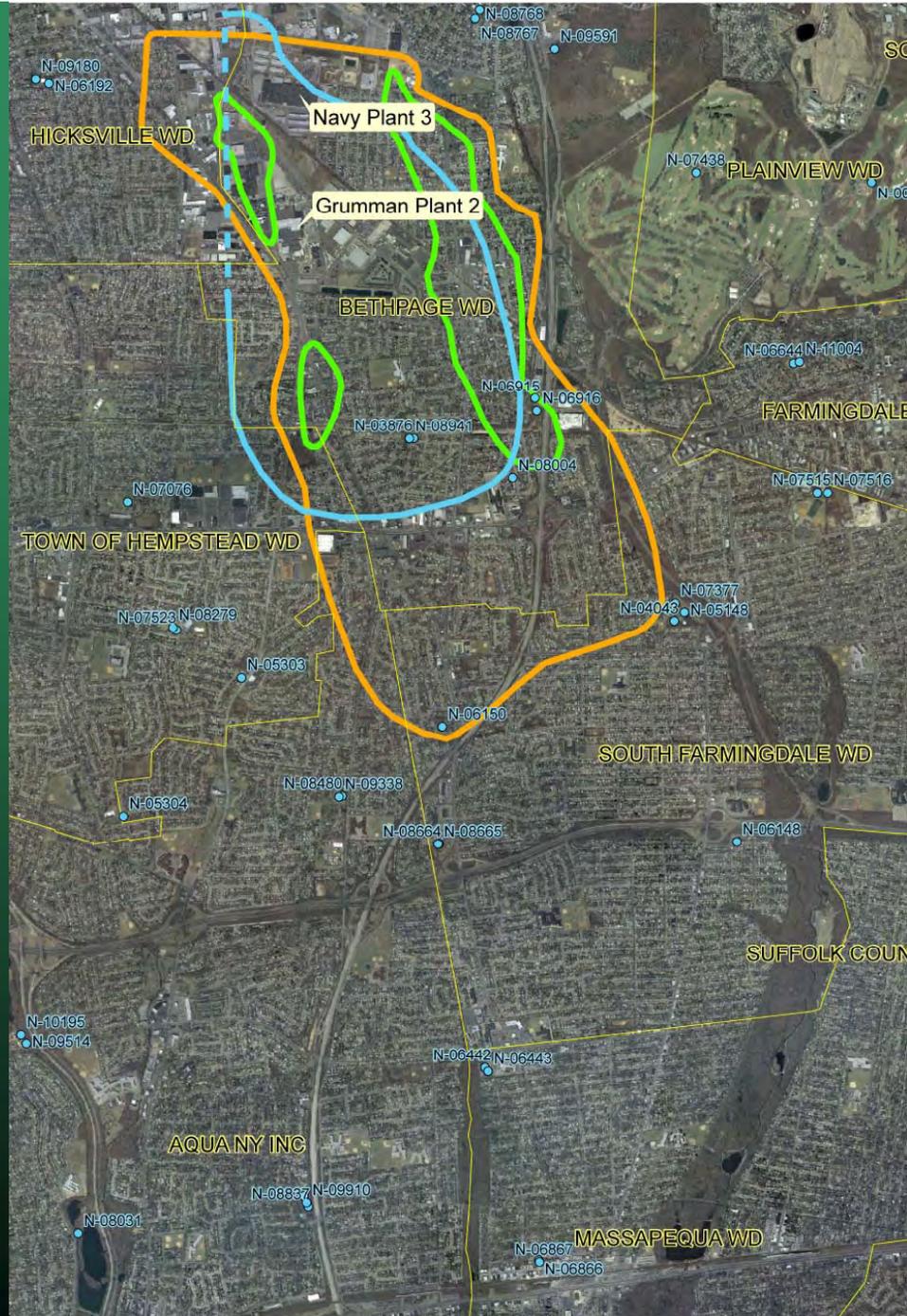
- **Introductions:**
 - Bill Fonda, Citizen Participation-NYSDEC
- **Site Background :**
 - James Harrington, Director NYSDEC Remedial Bureau A
- **Description of OU3 and Proposed Remedy :**
 - Steven Scharf, Project Manager-NYSDEC
- **Human Exposure Pathways :**
 - Steven Karpinski, Public Health Specialist-NYSDOH
- **Public Comment :**
 - Bill Fonda, Citizen Participation Specialist



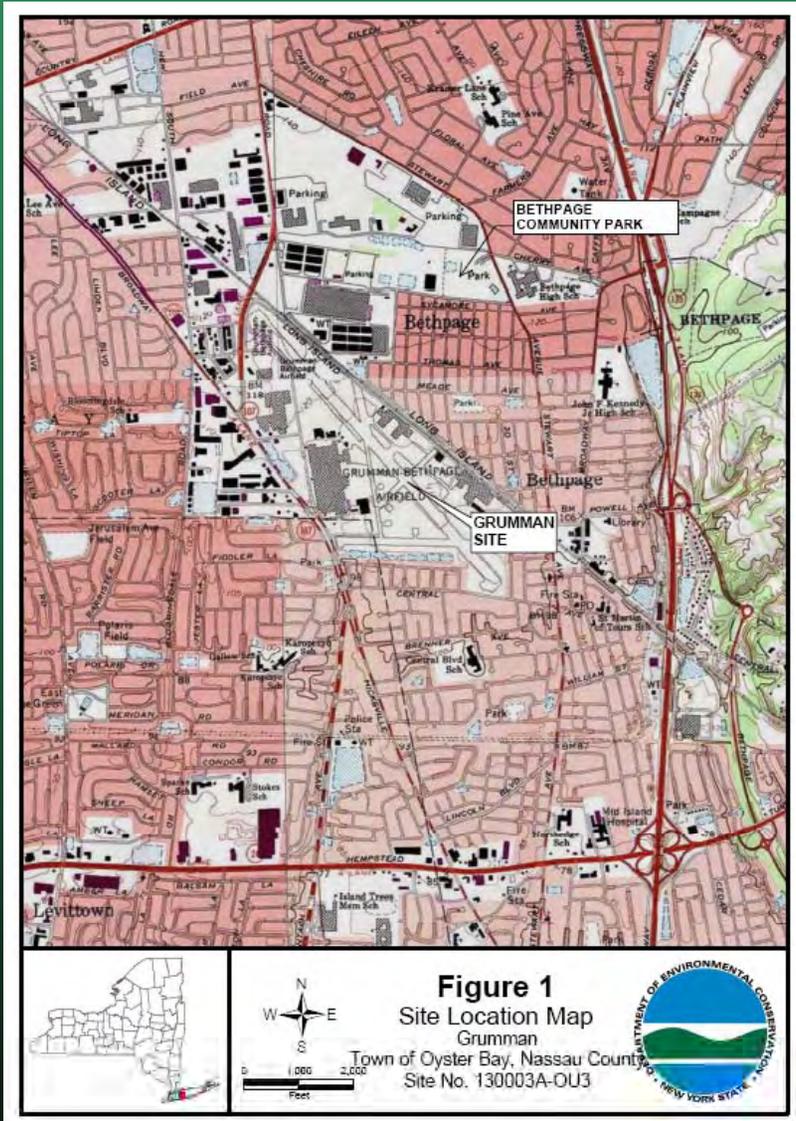
Background

- Grumman Aerospace
 - Grumman
 - NWIRP
- Remedial Efforts
 - OU1
 - OU2
 - OU3





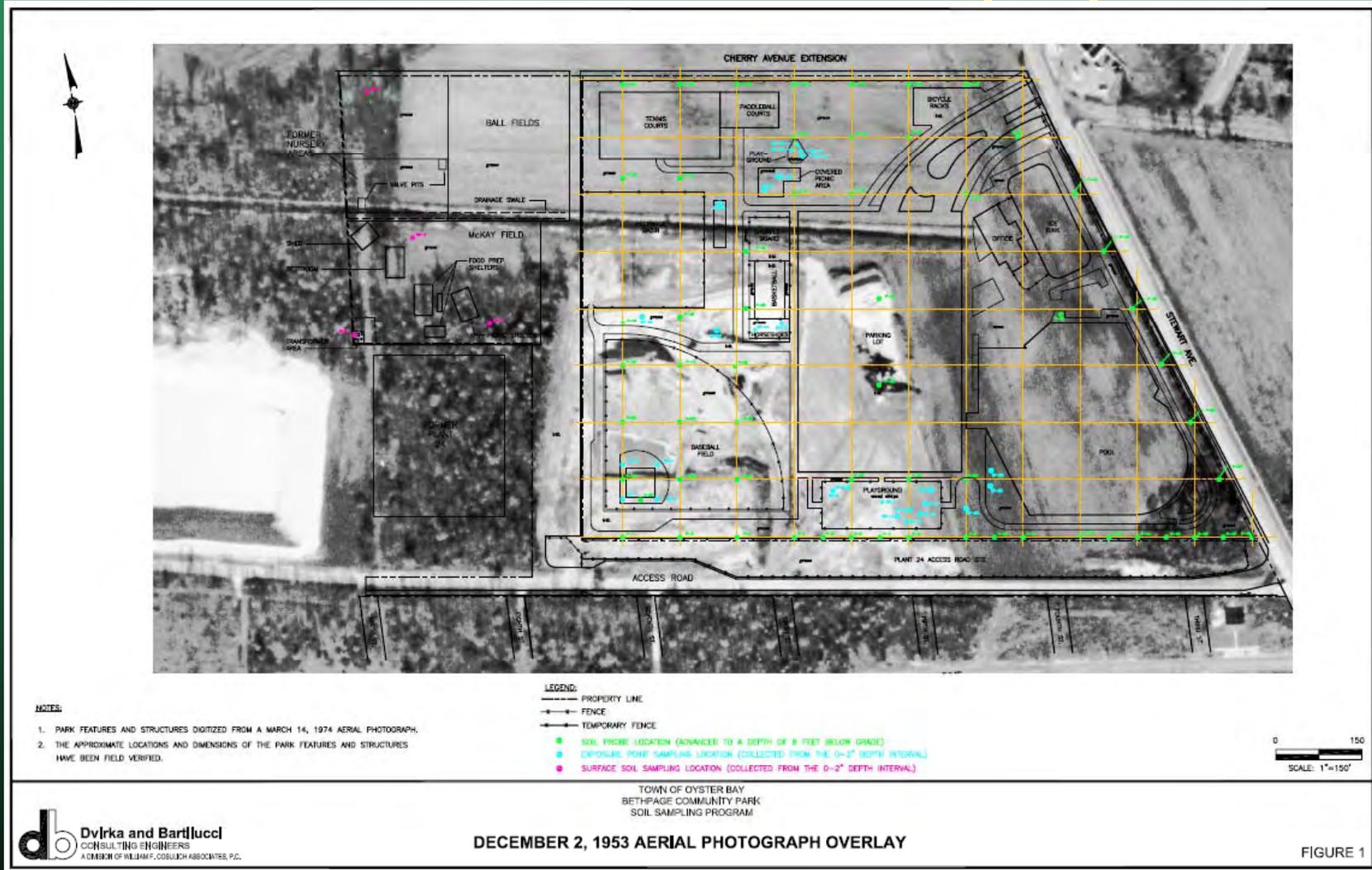
Site History and Description



Grumman F6E Hellcat, Circa 1942
Encarta Encyclopedia, Colour Pictures



1953 Aerial Photograph



1962 Aerial Photograph

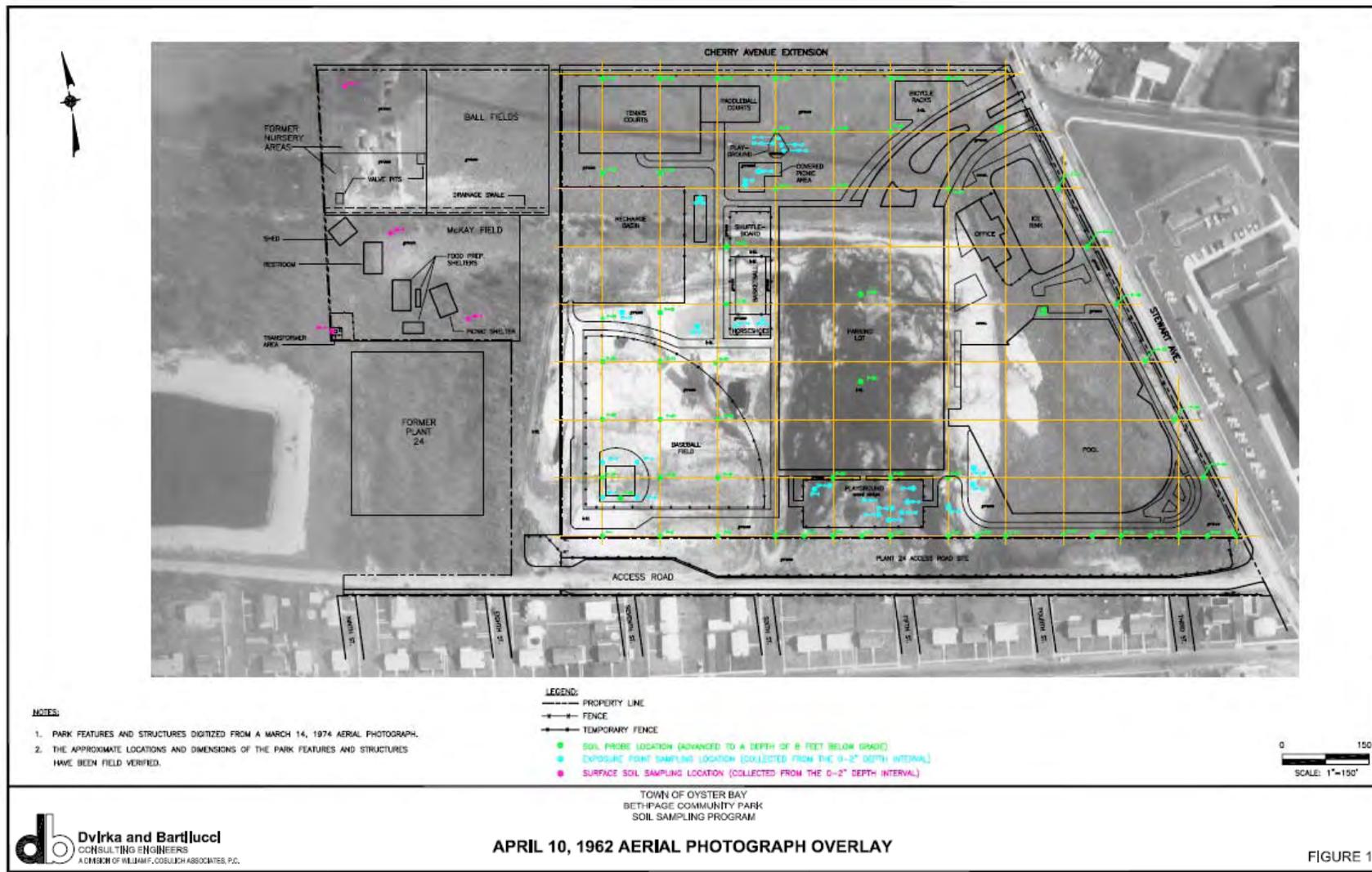
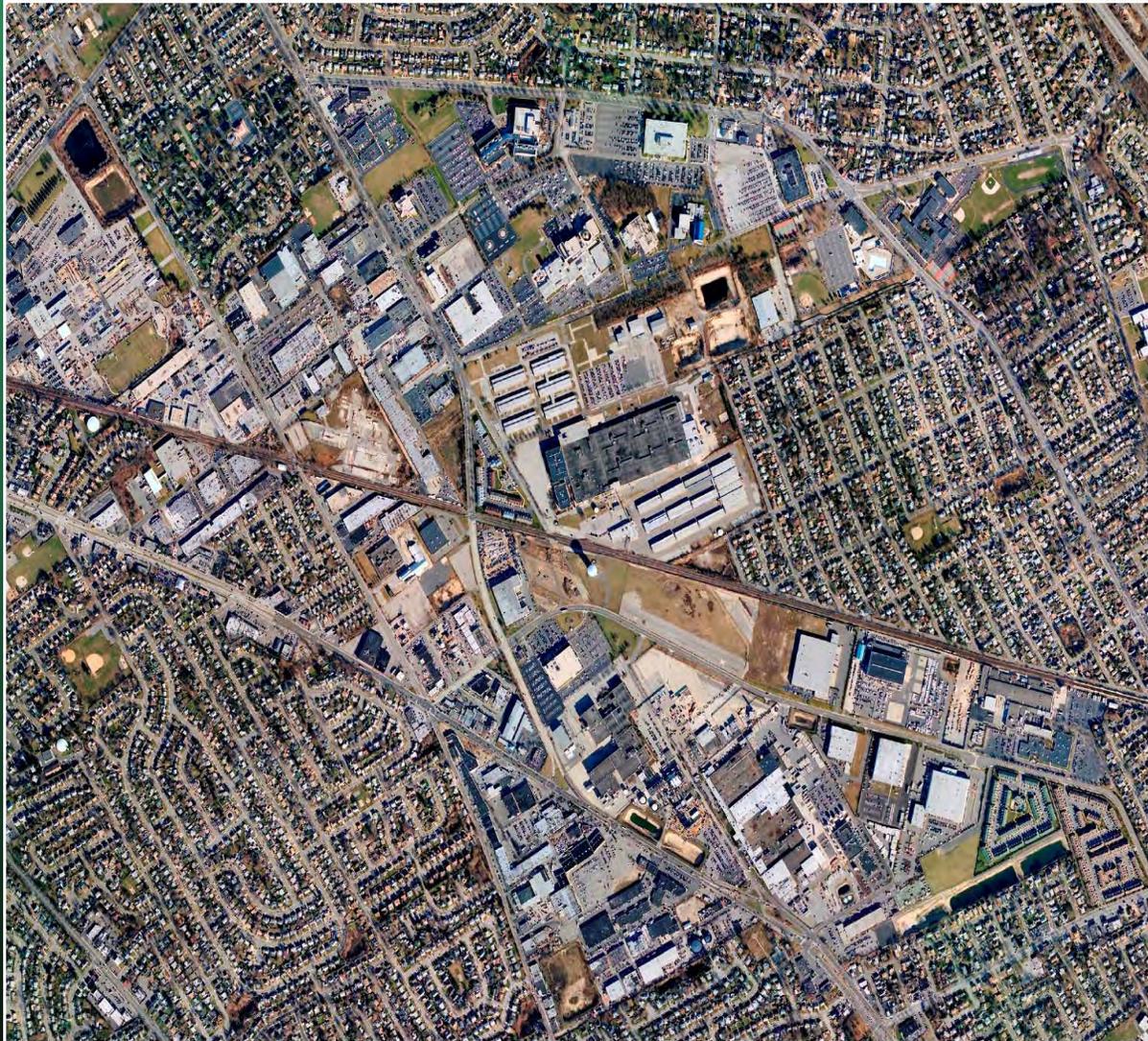


FIGURE 1



Site Area Circa 2004



NYS Department of Environmental Conservation



Potentially Responsible Parties

- Northrop Grumman Corporation
- Department of the Navy
- Town of Oyster Bay

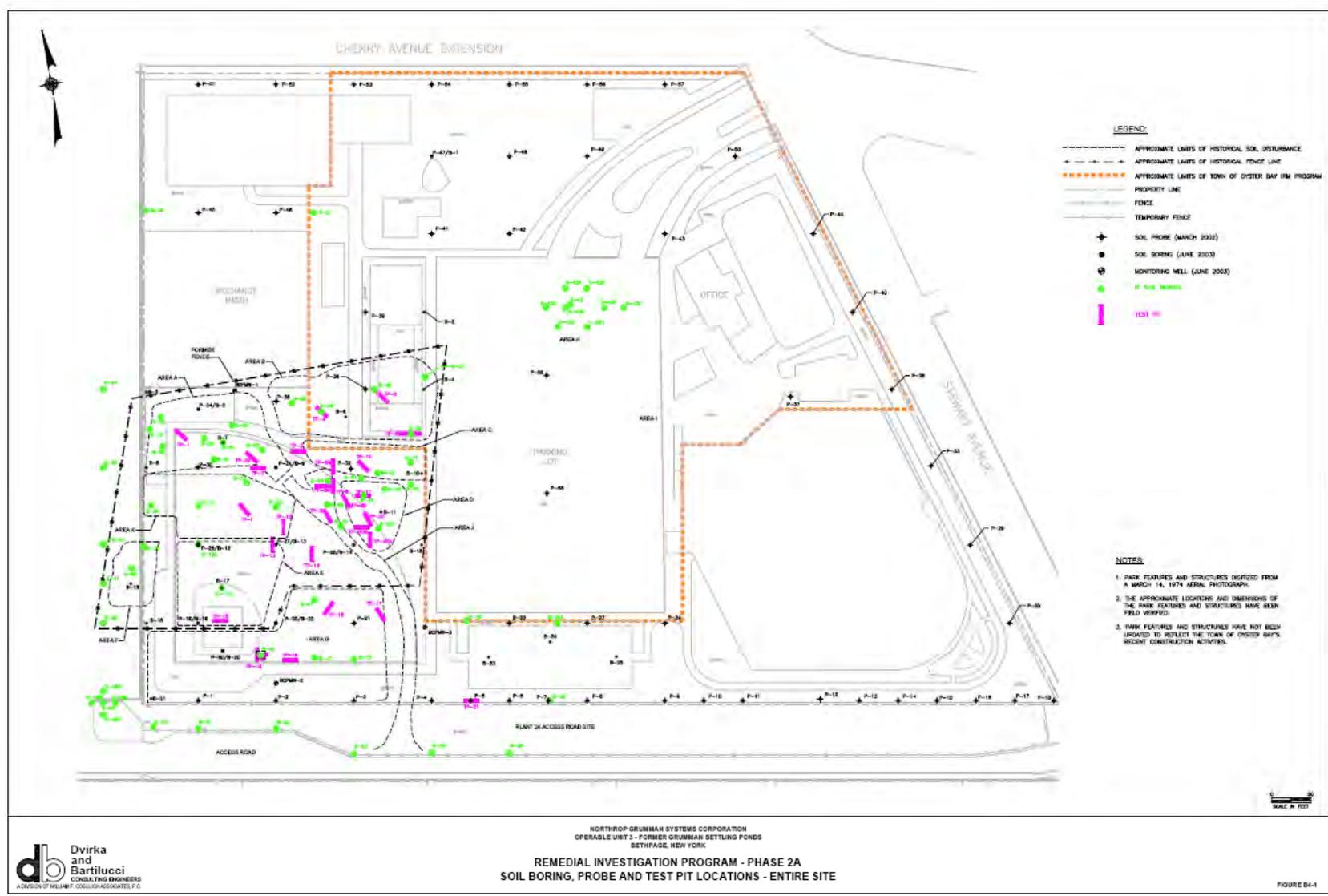


Remedial Investigation

- Historic Data and Report Search
- Geophysical Surveys: Ground Penetrating Radar, Terrain Conductivity & Resistivity
- Soil Borings: Over 100 in total
- Test Pits: More than 30
- Groundwater- Ongoing Sampling (>500)
- Soil Gas- 35 soil gas points



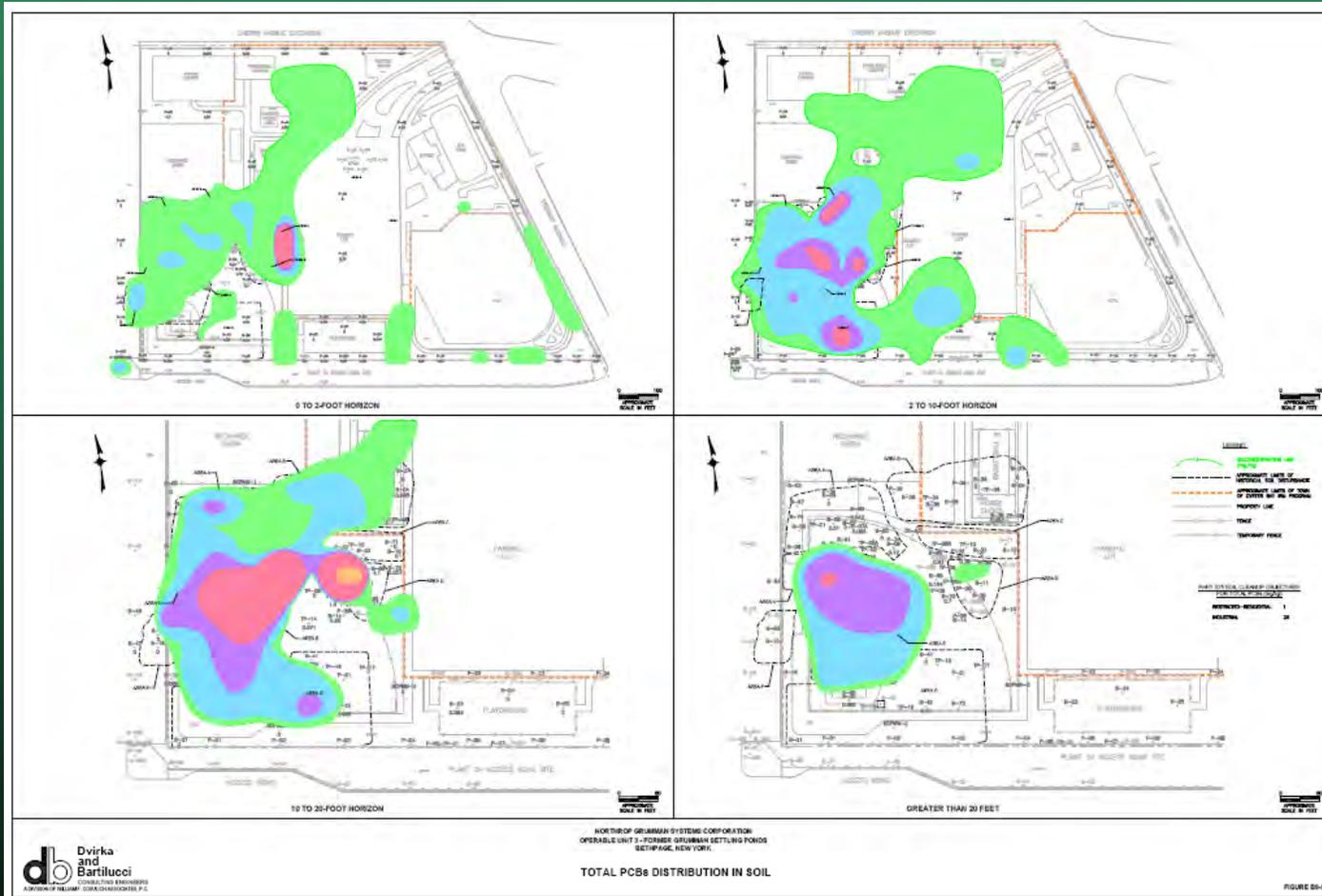
Test Pits and Soil Sampling



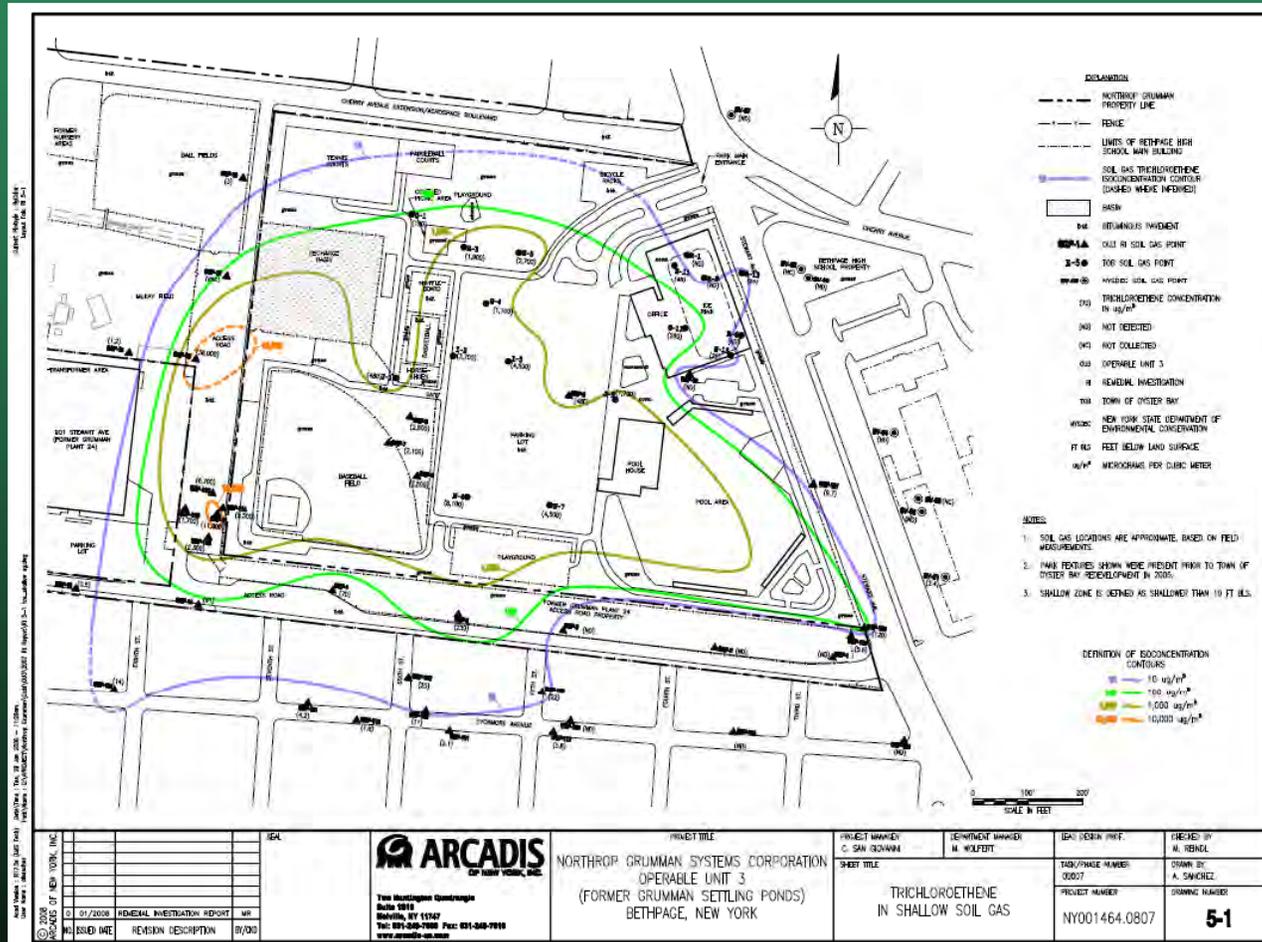
Waste Disposal and Source Areas



PCB Impacted Site Soils



Soil Gas

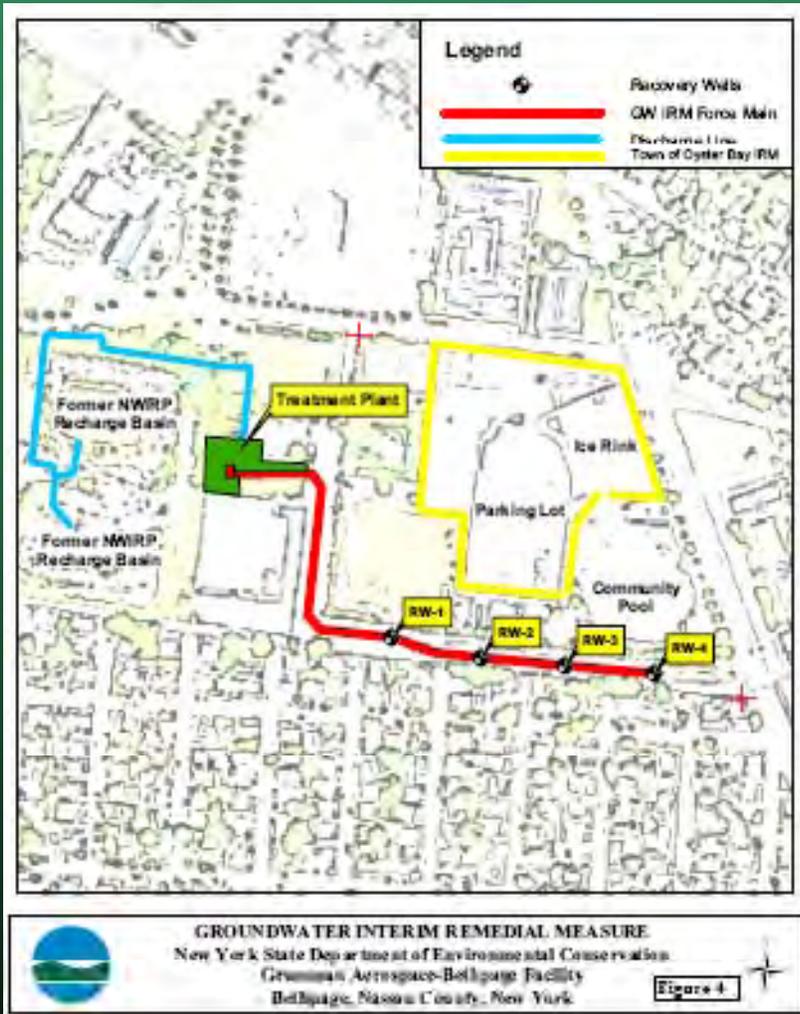


3 Interim Remedial Measures(IRMs)

- **1. Town of Oyster Bay: Investigation & Remediation- 7 of 11 Acres (2006-7)**
- **2. Grumman Soil Vapor Extraction (2008)**
- **3. Grumman Groundwater Pump and Treat Containment (2009)**



Interim Remedial Measures



Feasibility Study

- Develop alternatives
- Evaluate alternatives



Evaluation of Alternatives

The NYSDEC evaluates alternatives based on nine criteria:

1. Protection of human health and the environment
2. Compliance with standards, criteria and guidance
3. Short-term impacts and effectiveness
4. Long-term effectiveness and permanence
5. Reduction in toxicity, mobility and volume of contaminants
6. Implement ability
7. Cost effectiveness
8. Land use
9. Community Acceptance



Remedial Alternatives From the Proposed Plan

- Alternative 1 - No Action
- Alternative 2 - No Further Action
- Alternative 3 - Complete Excavation- Complete GW Extraction
- Alternative 4 - Site Capping, Groundwater Extraction
- Alternative 5 - Excavation to 10 feet *

* Proposed Alternative



Significant Components of the Proposed Alternative 5 Remedy Include:

– For Soils:

- Remove site soil above SCO's to 10 feet;
- Remove all hazardous waste;
- Remove soils above SCO's from Grumman Access Road;
- Treat soils in deep low permeability zone impacted with volatile organic compounds (VOCs) using in-situ thermal desorption and soil vapor extraction;
- Remove soil in residential yards near the Park to residential levels



- **For Groundwater:**
- Continue operation of on-site groundwater the pump and treat to prevent migration of groundwater offsite;
- Groundwater extraction and treatment of off-site groundwater hot spot with a goal of removing 90 percent of groundwater contaminant mass;
- The wellhead treatment contingency plan remains in effect.



- **Institutional Controls:** An environmental easement which will
 - Restrict use of the site
 - Prevent use of groundwater w/o treatment
 - Comply with Site Management Plan
 - Monitoring
 - Further Delineation of Downgradient Edge
 - Periodic Review



For Soil Vapor:

- Continued operation of the soil vapor extraction system to prevent migration.



Basis for Alternative 5

- Alt 1 and Alt 2 not protective
- Alt 3 - 5 have short term impacts but Alt 3 has more
- Long term effectiveness and permanence
Alt 3-5 have same permanence but Alt 3 will take much longer
- Alt 3 has the most reduction in TM&V, Alt 4 has the least



Basis for Alternative 5 - Cont

- Implementability -Alt 4 is the easiest. Alt 3 may be possible but is problematic
 - Significantly larger amounts of soil removal
 - Significantly more offsite wells in densely populated area
 - Significantly more treated water to discharge
 - Potential impact on downgradient public supply wells



Basis for Alternative 5 - Cont

- **Cost Effectiveness** - Alt 3 is significantly more expensive than Alt 5 but will not provide significantly enhanced benefit.
 - Soil will comply with proposed use down to 10'
 - Downgradient groundwater may still become contaminated
 - Alt 3 has unknown costs relative to downgradient hydraulic impact



Cost of Proposed Remedy

- Present Worth - \$ 81 M
 - Capital Cost - \$ 61.5 M
 - Annual Operating Cost – \$1.25 M



Remedial Alternative Costs

Remedial Alternative	Capital Cost (\$)	Annual Costs (\$)	Total Present Worth (\$)
Alternative 1	\$0	\$0	\$0
Alternative 2	\$0	\$ 650,000	\$10,450,000
Alternative 3	\$189,000,000	\$3,500,000	\$194,000,000
Alternative 4	\$40,250,000	\$1,100,000	\$58,000,000
Alternative 5	\$61,500,000	\$1,250,000	\$81,000,000





- * Human Exposure Pathways
- * Are People Being Exposed?



The DOH's Roll

Review available information

Evaluate if public health is being impacted by exposures to hazardous materials

Ensure that PRAP is protective of human health



Exposure

Contact with a hazardous material through:

- **Ingestion**
- **Inhalation**
- **Direct Contact**

If exposure does not occur – health cannot be impacted

Even if exposure does occur – health may not be impacted



DOH Concurrence

- The DOH has determined that the proposed remedy is protective of public health





Contact Information

Steven Karpinski

Public Health Specialist

New York State Department of Health

Bureau of Environmental Exposure
Investigation

Flannigan Square

547 River Street, Troy NY 12180

Phone: 1-518-402-7880



Northrop Grumman Former Grumman Settling Ponds

- **Availability Session: June 21, 2012**
7 – 9PM at Bethpage Community Center



Northrop Grumman Former Grumman Settling Ponds

**Comment Period extended to
July 30, 2012**

Send written comments to:

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(518) 402-9620**



Northrop Grumman Former Grumman Settling Ponds

- Public Comments



Northrop Grumman Former Grumman Settling Ponds

- Thanks for Coming!

