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**2013 Periodic Review Report (PRR) Outline  
On-Site Groundwater Remedy, Operable Unit 2 (OU2)  
Northrop Grumman Systems Corporation,  
Bethpage, New York, NYSDEC Site # 1-30-003A**

- I. Certification
- II. Executive Summary
  - A. Provide a brief summary of Site, nature and extent of contamination, and remedial history.
  - B. Effectiveness of the OU2 On-Site Groundwater Remedy - Provide overall conclusions regarding:
    - Progress made during the reporting period toward meeting the remedial objectives for the OU2 On-Site Groundwater Remedy.
    - The ultimate ability of the OU2 On-Site Groundwater Remedy to achieve the remedial objectives for the Site.
  - C. Compliance
    - Identify areas of non-compliance regarding the major elements of the Operation & Maintenance (O&M) Manual and associated Groundwater Monitoring Plan, if any.
    - Propose steps to be taken and a schedule to correct areas of non-compliance, if any.
  - D. Recommendations
    - Recommend changes to the O&M Manual (and associated Groundwater Monitoring Plan), if applicable.
    - Recommend changes to the frequency for submittal of PRRs, if applicable.
- III. Introduction
  - A. Describe that the PRR was requested by NYSDEC to address the OU2 On-Site Groundwater Remedy and its operation, maintenance and monitoring (consistent with the O&M Manual and associated Groundwater Monitoring Plan); no other elements of the OU2 ROD are addressed by this PRR. Establish that this periodic review period is for 2013 calendar year, and satisfies the requirement for an Annual Groundwater Monitoring Report.
- IV. Site Overview
  - A. Describe the Site location, boundaries, significant features, surrounding area, and the nature and extent of contamination prior to site remediation (reference 1994 RI Report). Use supporting figure(s).
  - B. Describe the chronology, main features/components of the OU2 On-Site Groundwater remedy for the Site, the remedial action objectives, and significant changes to the OU2

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On-Site Groundwater remedy that have been made since remedy selection (March 2001 OU2 ROD).

### V. Operation & Maintenance (O&M)

- A. Components of O&M Manual - Outline the requirements of the O&M Manual including required activities, frequencies, recordkeeping, etc. Indicate that the O&M Manual was revised and submitted to NYSDEC in May 2014. Sub-sections, or supporting tables, are anticipated to include:
- Routine/periodic inspection, parameter collection, and/or maintenance activities
  - Non-routine maintenance/alarm response activities
- B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during the PRR reporting period.
- C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluates the ability of each component of the remedy subject to O&M requirements to perform as designed/expected. Anticipated to include discussion of the following primary components for Towers 96 and 102 treatment systems: remedial well, water treatment, air (vapor) treatment operation and maintenance.
- D. Conclusions and Recommendations - Provide an overall conclusion regarding O&M for the Site and identify suggested modifications to the O&M program, if applicable.

### VI. Monitoring

- A. Components of the Monitoring Program - Describe the requirements of the monitoring plans in the O&M Manual by media (water, air) and associated Groundwater Monitoring Plan and by the remedial technologies being used at the Site. Tabular presentations will be used.
- Components of the Monitoring Program will include Remedial System Performance Monitoring, Remedial System Compliance Sampling, and Groundwater Monitoring.
  - Groundwater Monitoring includes water-levels and groundwater quality
- B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during the PRR reporting period. Tables will be used and may be presented by components of the overall monitoring program.
- C. Comparisons with Remedial Objectives - Compare the results of the monitoring with the remedial objectives for the Site. Anticipated to include tabular data presentation of validated data (e.g., for treatment system discharge criteria and/or applicable groundwater quality standards).

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- D. Conclusions and Recommendations - Provide an overall conclusion regarding monitoring for the Site and identify suggested modifications to the monitoring program, if applicable.

VII. Evaluation of Performance, Effectiveness, and Protectiveness

- A. Summarize the OU2 On-Site Groundwater Remedy, its objective(s), requirements and how performance of the system is evaluated.
- B. Describe the effectiveness of the OU2 On-Site Groundwater remedy in achieving the remedial goals for the Site, using tables, graphs, charts, figures (plan and profile views) and bulleted text to the extent practicable.
- C. Sub-sections are anticipated to include the following: Effectiveness (groundwater flow, groundwater quality), Performance (remedial system performance, mass removal), and Protectiveness/Compliance (discharge compliance).
- D. Conclusions will be presented along with recommendations, as applicable.

VIII. Overall PRR Conclusions and Recommendations

- A. Compliance with O&M Manual and associated Groundwater Monitoring Plan. For each component (i.e., O&M, monitoring), summarize:
- Whether requirements of each plan (O&M Manual and associated Groundwater Monitoring Plan) were met during the reporting period,
  - Proposed plans and a schedule for addressing areas requiring modification, if applicable.
- B. Performance and Effectiveness of the Remedy - Based upon evaluation of the components of the O&M Manual and associated Groundwater Monitoring Plan, provide conclusions about the performance and the ability of the OU2 On-Site Groundwater Remedy to achieve the remedial objectives for the Site.
- C. Future PRR Submittals – In future, for periodic reporting and review purposes, propose to return to the Annual Groundwater Monitoring Report per requirements of the O&M Manual and associated Groundwater Monitoring Plan.