

14 October 2022

Jocelyn Clark, Physical Scientist  
Special Projects Coordinator  
United States Environmental Protection Agency, Region 9  
75 Hawthorne Street  
San Francisco, California

VIA ELECTRONIC MAIL

**Subject: Third Quarter 2022 Progress Report  
Nammo Defense Systems Inc. Facilities  
Mesa, Arizona**

Pursuant with Paragraph 34 of the Administrative Order of Consent between Nammo Defense Systems Inc. (NDS) and the United States Environmental Protection Agency Region 9 (EPA) effective 9 February 2021, this submittal provides a summary of the activities completed during the third quarter (3Q) 2022.

**CONTACT INFORMATION AND CHANGES IN PROJECT PERSONNEL**

Contact Name and Position	Contact Information	Changes
Jocelyn Clark (EPA, Special Projects Coordinator)	<a href="mailto:Clark.Jocelyn@EPA.gov">Clark.Jocelyn@EPA.gov</a> (415) 972-3324	No change
Angel Soto (NDS, Health, Environment, Safety and Security [HESS] Director)	<a href="mailto:JSoto@Nammo.us">JSoto@Nammo.us</a> (602) 309-5819	No change
Carole Thompson (NDS, Communications Manager)	<a href="mailto:CThompson@Nammo.us">CThompson@Nammo.us</a> (480) 898-2565	No change
Isaac Roll (Geosyntec Project Engineer/NDS Environmental Program Consultant)	<a href="mailto:Iroll@geosyntec.com">Iroll@geosyntec.com</a> (602) 513-5829	No change

Fabrizio Mascioni (Geosyntec Consultants, Project Manager)	<a href="mailto:FMascioni@Geosyntec.com">FMascioni@Geosyntec.com</a> (602) 513-5816	No change
Jeremy Musson (Pinyon Environmental [Pinyon], Groundwater Sampling Project Manager)	<a href="mailto:musson@pinyon-env.com">musson@pinyon-env.com</a> (303) 980-5200	No change

## SIGNIFICANT ACTIVITIES DURING REPORTING PERIOD

### Deliverables

#### *Consent Order Project:*

- Revised Sampling and Analysis Plan for Groundwater Screening for Per- and Polyfluoroalkyl Substances (PFAS) – Submitted 9/21/2022
- Resource Conservation and Recovery Act (RCRA) Facility Assessment for Plant 2, Thermal Treatment Unit (TTU), and Desert Firing Range, Nammo Defense Systems Inc Facility – Submitted 9/23/2022
- Former TTU Groundwater Sampling and Analysis Plan – Revised with comments and submitted 9/28/2022
- 2Q 2022 Former TTU Groundwater Monitoring Report – Submitted 10/10/2022

#### *Plant 3 and Former Water Bore Out (WBO) Project:*

- No document milestones were reported.

### Meetings

- Biweekly meetings were conducted with EPA, Arizona Department of Environmental Quality (ADEQ), NDS, and its consultants related to the Consent Order Project.
- Monthly meetings were conducted with ADEQ, NDS, and its consultants related to the Voluntary Remediation Program Project.

### **Field Activities**

- 3Q 2022 groundwater sampling was conducted at the Former TTU well network from 9/3/2022 through 9/9/2022, and on 10/10 (TTU-2) and 10/11 (TTU-1). Wells TTU-1 and TTU-2 were inaccessible during September due to scheduling and operations with NDS.
- 3Q 2022 groundwater sampling was conducted at the former WBO well network from 8/31/2022 through 9/9/2022. Well WBO-1 was dry and not sampled.

### **Stakeholder Interaction and Meetings**

- A meeting to update the Contingency Plan for reporting alert-level exceedances of the constituents of concern (COCs) was attended by NDS, Salt River Pima-Maricopa Indian Community (SRPMIC), and Geosyntec on 8/30/2022.
- An agreement between NDS and Lafarge Holcim was executed on 9/21/22 for drilling and sampling at the Drake Materials facility.
- A meeting with the City of Mesa (COM) to discuss future well installations on COM property on 8/2/2022.

### **Notable Analytical Results**

#### ***Consent Order Project:***

- 3Q Groundwater Monitoring -
  - No notable analytical results were reported during the monitoring period.

#### ***Plant 3 and Former WBO Project:***

- 3Q Groundwater Monitoring –
  - No notable analytical results were reported during the monitoring period.

### **Action Items for Next Reporting Period**

#### ***Consent Order Project:***

- Submittal of 3Q 2022 Former TTU Groundwater Monitoring Report 60 days from receipt of laboratory reports.
- Completion of 4Q 2022 Former TTU sampling approximately 11/14/2022 through 12/2/2022.

- PFAS sampling at the Former TTU will be conducted as part of the 4Q groundwater monitoring event.
- Submittal of 1Q 2022 and 2Q 2022 data to the ADEQ Water Quality Database by 11/15/2022.
- Submittal of RCRA Facility Assessments for OU3 through OU5.
- Submittal of RCRA Facility Investigation (RFI) Work Plans for Operable Unit (OU) 2 through OU5.
- Coordination for request of information of OU1 closure documents with ZF TRW.
- Draft an updated Contingency Plan for SRPMIC review.

***Plant 3 and Former WBO Project:***

- Submittal of 2Q 2022 WBO Groundwater Monitoring Report by 11/1/2022.
- Submittal of 3Q 2022 WBO Groundwater Monitoring Report 60 days from receipt of laboratory reports.
- Completion of 4Q 2022 WBO sampling approximately 11/14/2022 through 12/2/2022.
- Coordinate a drilling schedule at Drake Materials Facility with Lafarge Holcim.
- Submittal to ADEQ of Remedial Investigation Work Plan Addendum outlining the proposed installations of NT-19, NT-20, NT-21, and NT-22.
- Permitting and drilling coordination for NT-19, NT-20, NT-21, and NT-22.

**Remediation Systems Updates**

***Consent Order Project – Interim Response Hydraulic Containment System:***

- The groundwater extraction and treatment system was operational during 2Q, however due to unanticipated staffing changes for NDS records could not be readily located. Record-keeping has resumed and the available 2Q/3Q records will be provided in 4Q.
- In May, a concentrate leak from the bottom corner of the SWE-II evaporator water storage tank was observed. The leak was contained within the concrete secondary containment and temporary repairs conducted to return the system to operation while path-forward measures are considered.

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***Plant 3 and Former WBO Project – Hydraulic Containment [Fluidized-Bed Reactor (FBR)] System***

Except for the short periods described below, the FBR system operated continuously at a process rate of approximately 400 gallons per minute. This is the nominal value associated with infiltration capacity and modeled capture of the source area. System interruptions occurred as follows:

- 7/18/2022 - During a thunderstorm a power breaker tripped, leading to an automatic shutdown. The breaker was reset by the onsite operator after the storm and operation resumed 11 hours offline.
- 8/23/2022 - A power outage occurred at the NDS facility, including at the FBR system. Power was restored and operation resumed after nine hours offline.

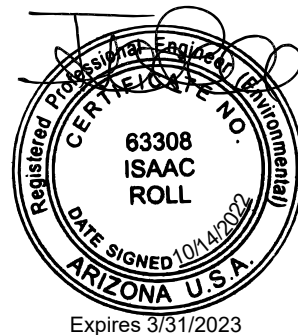
A fourth quarter progress report further describing performance and O&M responsibilities will be submitted to ADEQ in December 2022. If you have any questions about this report, please contact either Angel Soto with NDS or Isaac Roll with Geosyntec.

Sincerely,

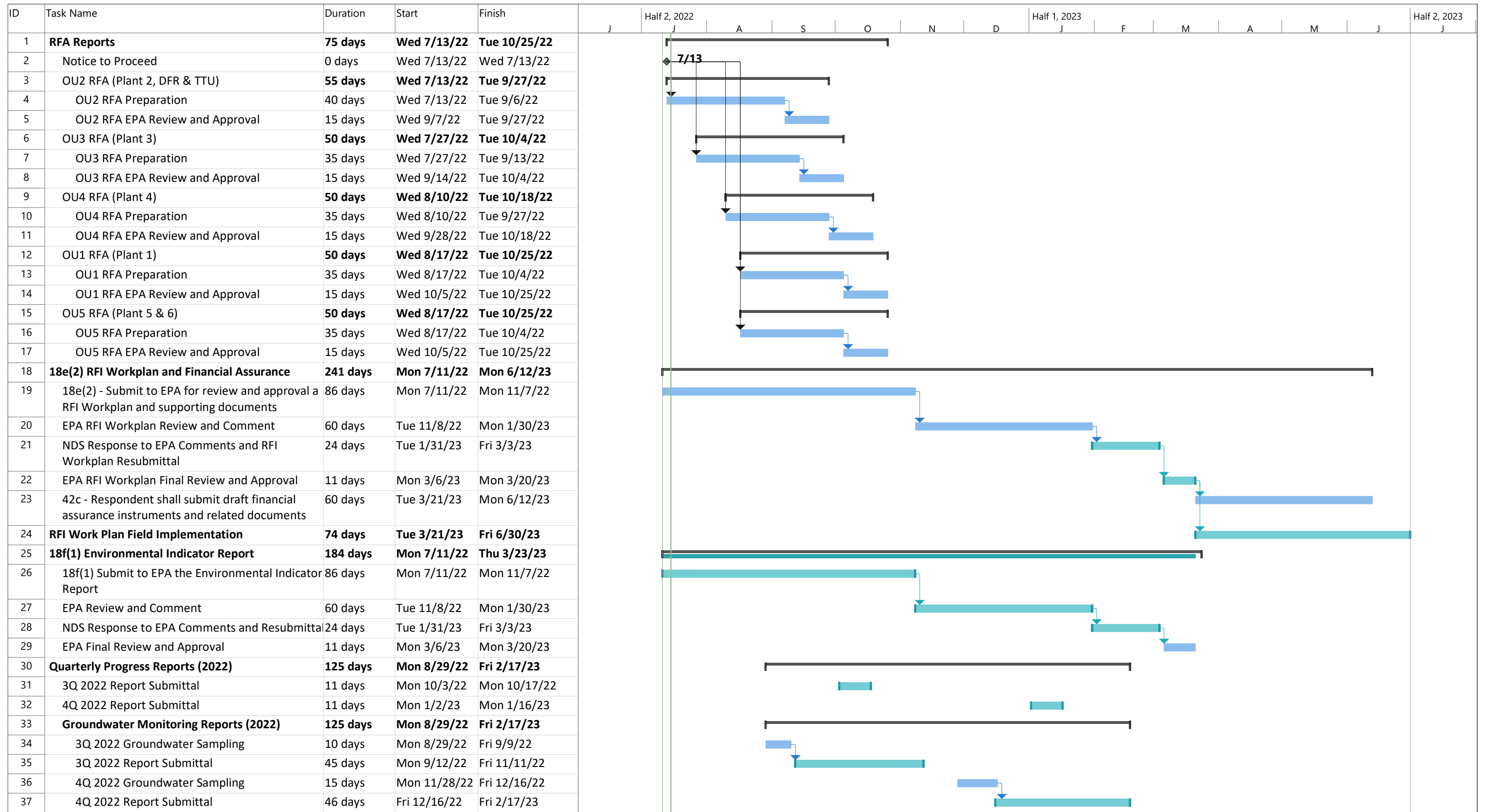


Isaac Roll, P.E. (AZ 65652)  
Project Engineer

Attachment: Project Schedule  
Copies to: Angel Soto, NDS  
Kyle Johnson, ADEQ  
Antony Leverock, ADEQ  
Robin Thomas, ADEQ  
Steve Arman, EPA  
William Frier, EPA  
Carol Hibbard, SRPMIC  
Christopher Horan, SRPMIC



# PROJECT SCHEDULE



Project: NDS Consent Order Sch Date: Fri 7/15/22	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			