

NAMMO DEFENSE SYSTEMS INC

April 11, 2024

Jocelyn Clark, P.E., Civil/Environmental Engineer
 Land, Chemicals and Redevelopment Division, RCRA Branch
 United States Environmental Protection Agency, Region 9
 75 Hawthorne Street, LND-4-2
 San Francisco, California 94105

VIA ELECTRONIC MAIL

Re: First Quarter 2024 Progress Report, Nammo Defense Systems Inc. Facility Mesa, Arizona

Dear Ms. Clark:

Pursuant with Paragraph 34 of the Administrative Order on Consent between Nammo Defense Systems Inc. (NDS) and the United States Environmental Protection Agency Region 9 (EPA) effective 9 February 2021, this report submittal includes a summary of the activities completed during the first quarter (Q1) 2024.

CONTACT INFORMATION AND CHANGES IN PROJECT PERSONNEL

Contact Name and Position	Contact Information	Changes
Jocelyn Clark, EPA, Special Projects Coordinator	Clark.jocelyn@EPA.gov (415) 972-3324	No change
Matthew Trask, Director, Ethics and Compliance	Mtrask@Nammo.us (480) 898-2495	No change
Carole Thompson, NDS, Communications Manager	Cthompson@Nammo.us (480) 898-2565	No change
Kate Blatchford, NDS, Environmental Project Engineer	Kblatchford@Nammo.us (480) 490-8911	Surname/Email Update

Fabrizio Mascioni, Geosyntec Consultants, Project Manager	Fmascioni@Geosyntec.com (602) 513-5816	No change
Isaac Roll, Geosyntec Consultants, Senior Engineer	Iroll@Geosyntec.com (602) 513-5829	No change
Jeremy Musson, Pinyon Environmental [Pinyon], Groundwater Sampling Project Manager	Musson@Pinyon-env.com (303) 980-5200	No change

SIGNIFICANT ACTIVITIES DURING REPORTING PERIOD

Meetings

- Biweekly meetings were conducted with EPA, Arizona Department of Environmental Quality (ADEQ), NDS, and its consultants including Geosyntec, related to the Consent Order Project.
- Monthly meetings were conducted with ADEQ, NDS, and its consultants related to the Voluntary Remediation Program Project.
- Meetings between EPA, ADEQ, and NDS to discuss Community Relations Plan (CRP) Document held virtually on 2/26/24 and 3/27/24.

NDS Communications

- NDS CRP Table of Contents submitted for EPA/ADEQ review on 2/15/24.
- Draft CRP due for EPA/ADEQ review 5/15/24.

Consent Order Project

Deliverables:

- Fourth Quarter 2023 Groundwater Monitoring Report, Former TTU, Nammo Defense Systems Inc., Mesa, Arizona submitted 2/13/24.
- Operable Unit 1 (OU1) RCRA Facility Investigation (RFI) Work Plan Extension Request submitted 1/29/24.
- Quality Assurance Project Plan (QAPP) submitted 2/1/24.
- Fourth Quarter 2023 Former TTU Interim Remedial Action (IRA) Report Nammo submitted 2/15/24.
- TTU GIS and Laboratory Database Package Submission Extension Request via email 3/1/24.
- Well Network Sampling Frequency Optimization (Revision 2) Former Thermal Treatment Unit Technical Memorandum submitted 3/7/24.
- Environmental Indicators Report Extension Request submitted 3/7/24.

- Conceptual Site Model Extension Request submitted 3/7/24.
- TTU GIS and Laboratory Database Package submitted 3/11/24.

Field Activities:

- Q1 2024 groundwater sampling was conducted 2/12/24 through 2/14/24.

Notable Analytical Results:

- Q1 2024 Groundwater Monitoring – 1,4-Dioxane was detected at well TTU-3 at a concentration of 5.27 micrograms per liter (ug/L). Aside from the previous event completed in Q4 2023, 1,4-Dioxane has been non-detect at this location. TTU-3 was resampled on 3/18/24, and the concentration of 1,4-Dioxane was measured as non-detect.
- Data reported for Q1 2024 from TTU-15 and TTU-16 suggest that the two samples were potentially switched at the lab. NDS had TTU-15 and TTU-16 resampled on 4/9/24, and we are currently awaiting analytical results.

Remediation Systems Update:

Evaporator Unit

- During Q1 the evaporator system processed approximately 13,780 gallons of water.
- Cleaning of evaporator tank completed 3/1/24.
- Approximately 3,000 gallons of water was collected from the wells by NDS and sent for offsite disposal due to compressor malfunction. The evaporator was down from 3/2/24 through 3/3/24.

Action Items for Next Reporting Period:

- Submittal of Q1 2023 Former TTU Annual Groundwater Monitoring Report 60 days from end of quarter (5/31/24).
- Completion of Q2 2024 groundwater sampling (May 2024).
- Submittal of a GIS and Laboratory Database package including Q1 2024 groundwater monitoring data (5/31/24).

Plant 3 and Former Water Bore Out (WBO) Project

Deliverables:

- Annual 2023 Groundwater Monitoring Report, Former WBO, Nammo Defense Systems Inc., Mesa, Arizona submitted 3/12/24.
- Fourth Quarter 2023 Former WBO Interim Remedial Action (IRA) Report Nammo submitted 2/14/24.

- Technical Memorandum Well Network Sampling Frequency Optimization (Revision 3) submitted 1/12/24.
- Technical Memorandum Well Network Sampling Frequency Optimization Approval from ADEQ 2/8/24.
- Maricopa County Air Quality Permit Modification submission (to include SVE system) submitted 2/27/24.
- Cost Estimate Remediation Investigation Plant 3 and Former WBO submitted 2/29/24.
- WBO GIS and Laboratory Database Package Submission Extension Request via email 3/1/24.
- WBO laboratory and GIS database submitted 3/11/24.
- Well Installation Technical Memorandum for NT-19 and NT-20 submitted 3/22/24.

Field Activities:

- SVE System Installation at Plant 3 completed on 1/26/24.
- Q1 2024 groundwater sampling was conducted 2/12/24 through 2/14/24.

Notable Analytical Results:

- Q1 2024 Groundwater Monitoring – Results from Q1 groundwater monitoring indicate perchlorate concentrations in wells NT-19 and NT-20S/D were below the ADEQ screening level of 14 ug/L. This data point currently delineates the south-eastern portion of the plume. Concentrations of perchlorate continue to increase as observed historically, from 9,930 ug/L to 10,100 ug/L at monitoring well NT-5.

Action Items for Next Reporting Period:

- Coordinate repair/replacement of NT-4 with property owner.
- Completion of Q2 2024 quarterly sampling in May 2024.
- Start-up of Plant 3 SVE system construction during Q2 2024 upon receipt of approved Maricopa County Air Permit.

Remediation System Updates:

Hydraulic Containment FBR System

The hydraulic containment system implemented at the former WBO pits area uses an FBR system to treat water extracted from extraction wells (EXT-1 and EXT-2), where EXT-2 is typically held in reserve while EXT-1 is operated. Between 1/1/24 and 3/31/24, the FBR system operated continuously at an average flow rate of approximately 280 gallons per minute.

There was approximately two days of downtime for FBR 370 due to a compressor belt failure and approximately 7 hours of downtime associated with ORP adjustments and strainer cleaning.

FBR-230 was shut down all of January, February, and March for the removal and repair of the recirculation pump. The pump was replaced on 3/29/24 and FBR-230 will be operated in a batch configuration while the perchlorate reducing microbial community reestablishes itself.

Soil Vapor Extraction System (Plant 3)

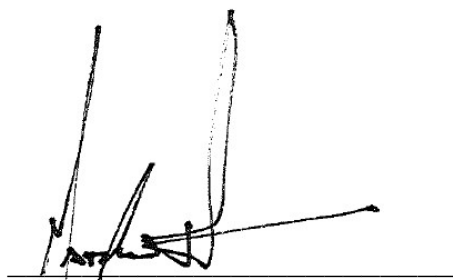
Construction of the SVE system was completed on 1/26/24. Start-up will commence once an approved Maricopa Air Quality Permit is received.

If you have any questions about this report, please contact Matthew Trask at Mtrask@Nammo.us or at 480.898.2495.

Sincerely,

NAMMO DEFENSE SYSTEMS INC.

By:



Matthew P. Trask
Sr. Director, Shared Services USA

cc: William Frier, USEPA