

Los Angeles Regional Water Quality Control Board

February 14, 2014

Mr. Joseph P. Kwan
Corporate Director, Environmental Remediation
Northrop Grumman Systems Corporation
2980 Fairview Park Drive
Falls Church, VA 22042-4511

Dear Mr. Kwan:

CHANGE LETTER, WASTE DISCHARGE REQUIREMENTS (WDRs) AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR NORTHROP GRUMMAN SYSTEMS CORPORATION, NORTHROP GRUMMAN – HAWTHORNE SITE (FORMERLY TRW INC), HAWTHORNE, CA. (NPDES NO. CA0063916, CI NO. 7698)

Pursuant to Division 7 of the California Water Code, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) at a public hearing held on November 7, 2013, adopted Order No. R4-2013-0169.

Subsequent to the adoption of Order No. R4-2013-0169, Regional Board identified errors in the permit requiring minor modifications consistent with Title 40 Code of Federal Regulations section 122.63 subsections (a), (b), and (c) as follows:

- **Section VI.C.3, Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program. (page 13):**

The Order states that:

“As defined in the Harbor Toxics TMDL, the Discharger is a “responsible party” because it is an “Individual Industrial Permittee”. As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the “TMDL Element – Monitoring Plan” provisions in Attachment A to Resolution No. R11-008. The Monitoring Plan and QAPP shall be submitted 20 months after the effective date of the TMDL for public review and subsequent Executive Officer approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer.”

The TMDL became effective on March 23, 2012 and therefore 20 months after that date was November 23, 2013. This Order did not become effective, however, until December 7, 2013. Regional Board Staff has developed updated instructions for meeting the TMDL requirements that apply to permits adopted or effective after November 23, 2013. The

Order is corrected to incorporate these updated instructions and the above text is replaced with the following:

“As defined in the Harbor Toxics TMDL, the Discharger is a “responsible party” because it is an “Individual Industrial Permittee”. As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the “TMDL Element – Monitoring Plan” provisions in Attachment A to Resolution No. R11-008. The Discharger must inform the Regional Board if they plan to join a collaborative monitoring effort or develop a site specific plan no later than **90 days** after the effective date of this Order. If the Discharger is joining a collaborative effort that notification must include documentation of such. If developing a site specific monitoring plan, the plan must be submitted no later than **12 months** after the effective date of this Order for public review and, subsequently, Executive Officer approval. Monitoring shall begin 6 months after a monitoring plan is approved by the Executive Officer.”

- **Section III.A.1, Table E-2 (page E-6):**

In the table the “Required Analytical Test Method” for parameters “Toxicity- Acute” and “Toxicity – Chronic”, is listed as “^{1,8}”. Footnotes 1 and 7 are applicable to the test method for these parameters. Therefore the footnote reference under “Required Analytical Test Method” for these parameters is corrected to “^{1,7}”.

Also, in the same table the “Minimum Sampling Frequency” for parameter “E.coli” is listed as “1/Year⁷”. Footnote 6 is applicable to the sampling frequency for this parameter. Therefore the footnote reference under “Minimum Sampling Frequency” for parameter “E.coli” is corrected to “1/Year⁶”.

- **Section XI.D.2 (page E-20):**

This is the same issue addressed in Section VI.C.3 (page 13) above. The Regional Board has developed updated instructions for meeting the TMDL requirements that apply to permits adopted or effective after November 23, 2013. The Order is corrected to incorporate these updated instructions and therefore the text:

“Within **20 months** of the effective date of the Harbor Toxics TMDL (by November 23, 2013) **and annually thereafter**, the Discharger or the Responsible Parties shall submit annual implementation reports to the Regional Water Board. The reports shall describe the measures implemented and the progress achieved toward meeting the assigned WLAs and LAs.”

Is replaced with the following:

“Within **90 days** of the effective date of this Order, the Discharger must submit to the Regional Water Board notification of whether Northrop Grumman Systems Corporation, Northrop Grumman – Hawthorne Site will be participating with an

organized group of Responsible Parties to complete the regional monitoring required by the Harbor Toxics TMDL, or if the Discharger will be developing a site specific plan. If developing a site specific plan, that plan is due to the Regional Water Board 12 months from the effective date of this Order. Regional Water Board staff will review the plan and provide an opportunity for public comment. Six months after the receipt of the plan the Executive Officer will comment or approve the plan. The Discharger has six months after the approval to implement the plan. The Discharger or the Responsible Parties shall submit annual implementation reports to the Regional Water Board. The reports shall describe the measures implemented and the progress achieved toward meeting the assigned WLAs and LAs.”

- **Section III.D Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program (page F-13):**

This is the same issue addressed in Section VI.C.3 (page 13) above. The Regional Board has developed updated instructions for meeting the TMDL requirements that apply to permits adopted or effective after November 23, 2013. The Order is corrected to incorporate these updated instructions and therefore the text:

“The TMDL’s implementation schedule allows up to 20 years after the TMDL effective date to attain WLAs and load allocations for those dischargers who justify the need for additional time in a compliance plan. During this period, the discharger is required, either individually or with a collaborating group, to develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in the Dominguez Channel Estuary. These plans shall follow the “TMDL Element – Monitoring Plan” provisions in Attachment A to Resolution No. R11-008. The Monitoring Plan and QAPP shall be submitted 20 months after the effective date of the TMDL for public review and subsequent Executive Officer approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer, unless otherwise directed by the Executive Officer.”

Is replaced with the following:

“The TMDL’s implementation schedule allows up to 20 years after the TMDL effective date to attain WLAs and load allocations for those dischargers who justify the need for additional time in a compliance plan. During this period, the discharger is required, either individually or with a collaborating group, to develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in the Dominguez Channel Estuary. These plans shall follow the “TMDL Element – Monitoring Plan” provisions in Attachment A to Resolution No. R11-008. The Discharger must inform the Regional Board if they plan to join a collaborative monitoring effort or develop a site specific plan no later than **90 days** after the effective date of this Order. If the Discharger is joining a collaborative effort that notification must include documentation of such. If developing a site specific monitoring plan, the plan must be submitted no later than **12 months** after the effective date of this Order for public review and, subsequently, Executive Officer approval. Monitoring

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shall begin 6 months after a monitoring plan is approved by the Executive Officer."

Pursuant to 40 C.F.R. section 122.63(a) minor modifications of a permit are allowed without following the procedures of 40 C.F.R. part 124. On January 30, 2014 the Discharger provided consent via email for the Regional Board to make these minor modifications. Regional Board staff therefore prepared the attached pages 13, 14, E-6, E-20, E-21, F-13, and F-14 which incorporate the corrections explained above. These pages replace the corresponding pages in Order No. R4-2013-0169 adopted on November 7, 2013.

If you have any further questions, please contact Thomas Siebels at (213) 576-6756.

Sincerely,



Samuel Unger, P.E.,
Executive Officer

Enclosures

MAILING LIST

Ms. Robyn Stuber, Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
NPDES Wastewater Unit, State Water Resources Control Board, Division of Water Quality
Mr. Kenneth Wong, U.S. Army Corps of Engineers
Mr. Bryant Chesney, NOAA, National Marine Fisheries Service
Mr. Jeff Phillips, Department of Interior, U.S. Fish and Wildlife Service
Mr. William Paznokas, Department of Fish and Game, Region 5
Ms. Leah Walker, California Department of Public Health
Ms. Barbara Fosbrink, California State Parks and Recreation
Ms. Teresa Henry, California Coastal Commission, South Coast Region
Mr. Theodore Johnson, Water Replenishment District of Southern California
Mr. Tommy Smith, Los Angeles County, Department of Public Works
Mr. Angelo Bellomo, Los Angeles County, Department of Health Services
Ms. Kirsten James, Heal the Bay
Ms. Liz Crosson, Los Angeles WaterKeeper
Ms. Anna Kheyfets, Natural Resources Defense Council
Mr. Matthew Carfagno, Orion Environmental, Inc.
Mr. Jae Kim, TetraTech
Ms. Ann La Duca, TetraTech
Mr. Klaus Rowher, Equipoise Corp.
Mr. Chris Stoker, Equipoise Corp.

Northrop Grumman Systems Corporation
Northrop Grumman—Hawthorne Site (Formerly TRW Inc)
(NPDES NO. CA0063916)

CORRECTED WASTE DISCHARGE REQUIREMENTS PAGES

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Chronic Toxicity Limit and Monitoring Requirements.** The Order contains a chronic toxicity limit defined as an exceedance of 1.0 TUc in a critical life stage test for 100% effluent (The monthly median for chronic toxicity of 100% effluent shall not exceed 1 TUc in a critical life stage test). The Discharger shall monitor the effluent annually for chronic toxicity to determine the presence of chronic toxicity. If the chronic toxicity of the effluent exceeds 1.0 TUc monthly median (where $TUc = 100/NOEC$), the Discharger shall immediately implement accelerated chronic toxicity testing, as required in Section V.B of the Monitoring and Reporting Program (Attachment E).
- b. **Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Regional Water Board an Initial Investigation Toxicity Reduction Evaluation (TRE) workplan (1-2 pages) **within 90 days** of the effective date of this permit. If the Executive Director does not disapprove of the workplan within 60 days, the workplan shall become effective. The Discharger shall use USEPA manual EPA/600/2-88/070 (industrial) as guidance. This plan shall describe the steps the permittee intends to follow in the event that toxicity is detected, and should include at a minimum:
 - i. A description of the investigation and evaluation techniques that will be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency;
 - ii. A description of the facility's method of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility;
 - iii. If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (Section V of the MRP, Attachment E, provides references for the guidance manuals that should be used for performing TIEs).

3. **Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program.** As defined in the Harbor Toxics TMDL, the Discharger is a "responsible party" because it is an "Individual Industrial Permittee". As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the "TMDL Element – Monitoring Plan" provisions in Attachment A to Resolution No. R11-008. The Discharger must inform the Regional Board if they plan to join a collaborative monitoring effort or develop a site specific plan no later than **90 days** after the effective date of this Order. If the Discharger is joining a collaborative effort that notification must include documentation of such. If developing a site specific monitoring plan, the plan must be submitted no later than **12 months** after the effective date of this Order for public review and,

subsequently, Executive Officer approval. Monitoring shall begin 6 months after a monitoring plan is approved by the Executive Officer.

4. Best Management Practices Plan

The Discharger shall submit to the Regional Water Board, within 90 days of the effective date of this Order, an updated Best Management Practices Plan (BMPP). The BMPP shall include site specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The BMPP shall be consistent with the general guidance contained in the USEPA Guidance Manual for Developing Best Management Practices (BMPs) (EPA 833-B-93-004) and any applicable advanced technologies.

5. Construction, Operation and Maintenance Specifications

- a. The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this order.
- b. The Discharger shall develop and maintain a record of all spills from the facility. This record shall be made available to the Regional Water Board and USEPA upon request. The Discharger shall submit to the Regional Water Board and USEPA a report listing all spills, overflows or bypasses occurring during the previous quarter in the quarterly monitoring reports. The reports shall provide the date and time of each spill, the location of each spill, the estimated volume of each spill, including gross volume, amount recovered and amount not recovered; the cause of each spill, whether each spill, entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances; mitigation measures implemented; corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and beneficial uses impacted.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions – Not Applicable

8. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

A. Single Constituent Effluent Limitation.

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), then the Discharger is out of compliance.

Northrop Grumman Systems Corporation
Northrop Grumman—Hawthorne Site (Formerly TRW Inc)
(NPDES NO. CA0063916)

**CORRECTED MONITORING AND REPORTING PROGRAM
PAGES**

Table E-2. Effluent Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow, Total	gallons/day	Grab	1/Quarter	1
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	Grab	1/Quarter ²	1
Oil and Grease	mg/L	Grab	1/Quarter ²	1
pH	standard units	Grab	1/Quarter	1
Total Suspended Solids (TSS)	mg/L	Grab	1/Quarter ²	1
Copper, Total Recoverable	µg/L	Grab	1/Quarter ²	1
Selenium, Total Recoverable	µg/L	Grab	1/Quarter ²	1
Lead, Total Recoverable	µg/L	Grab	1/Quarter ²	1
Zinc, Total Recoverable	µg/L	Grab	1/Quarter ²	1
Bis (2-Ethylhexyl)phthalate	µg/L	Grab	1/Quarter ²	1
Acetone	µg/L	Grab	1/Quarter ²	1
1,1,1-trichloroethane	µg/L	Grab	1/Quarter ²	1
Dissolved Oxygen	mg/L	Grab	1/Quarter	1
Phenolic Compounds (chlorinated)	µg/L	Grab	1/Quarter ²	1
Residual Chlorine	mg/L	Grab	1/Quarter	1
Sulfides	mg/L	Grab	1/Quarter ²	1
Temperature	°F or °C	Grab	1/Quarter	1
Turbidity	NTU	Grab	1/Quarter	1
Xylene	µg/L	Grab	1/Quarter ²	1
Toxicity – Acute ³	% survival and Pass or Fail for TST approach	Grab	1/Year	1,7
Toxicity - Chronic ³	TUc and Pass or Fail for TST approach	Grab	1/Year	1,7
E.coli	MPN/100mL or CFU/100ml	Grab	1/Year ⁶	1
Remaining Priority Pollutants ⁴	µg/L	Grab	1/Year	1
TCDD Equivalents ⁵	µg/L	Grab	1/Year	1

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest MLs specified in Attachment 4 of the SIP and included as Attachment H. If no methods are specified for a given pollutant, use methods approved by this Regional Water Board or the State Water Board.

² The mass emission (lbs/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

$$M = 8.34 \times C_e \times Q$$

where: M = mass discharge for a pollutant, lbs/day

C_e = limitation concentration for a pollutant, mg/L

Q = actual discharge flow rate, MGD

the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

8. The Discharger shall submit SMRs in accordance with the following requirements:
 - a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
 - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
 - c. SMRs must be submitted to the Regional Water Board electronically as specified in finding XI.B.1. above, signed and certified as required by the Standard Provisions (Attachment D). If the size of the submittal necessitates the submittal of a disk, please mail it to the address listed below:

California Regional Water Quality Control Board

Los Angeles Region

320 W. 4th Street, Suite 200

Los Angeles, CA 90013

C. Discharge Monitoring Reports (DMRs) – Not Applicable

D. Other Reports

1. Within 90 days of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:
 - a. Initial Investigation TRE Workplan
 - b. Updated BMPP
2. Within **90 days** of the effective date of this Order, the Discharger must submit to the Regional Water Board notification of whether Northrop Grumman Systems Corporation, Northrop Grumman – Hawthorne Site will be participating with an organized group of Responsible Parties to complete the regional monitoring required by the Harbor Toxics TMDL, or if the Discharger will be developing a site specific plan. If developing a site specific plan, that plan is due to the Regional Water Board 12 months from the effective date of this Order. Regional Water Board staff will

review the plan and provide an opportunity for public comment. Six months after the receipt of the plan the Executive Officer will comment or approve the plan. The Discharger has six months after the approval to implement the plan. The Discharger or the Responsible Parties shall submit annual implementation reports to the Regional Water Board. The reports shall describe the measures implemented and the progress achieved toward meeting the assigned WLAs and LAs.

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CORRECTED FACT SHEET PAGES

The Harbor Toxics TMDL also includes freshwater metals interim allocations for Dominguez Channel (wet weather only) for copper, lead and zinc (Attachment A to Resolution No. R11-008, p. 10). The interim limits, however, are greater than the limits established in the previous permit and are greater than the levels observed during effluent monitoring. Because the interim limits do not allow any decrease in current facility performance, and to satisfy anti-backsliding and anti-degradation requirements, the TMDL interim limits are not applicable to the discharge from this facility.

The Harbor Toxics TMDL also includes both final and interim freshwater toxicity allocations for Dominguez Channel in wet weather. The final allocation is 1 TUc, or its equivalent based on any Statewide Toxicity Policy (Attachment A to Resolution No. R11-008, p. 11). On January 15, 2007, an effluent sample was collected at Discharge Point 001 that indicated selenastrum toxicity. On February 7, 2007, a chemical sequestering agent was added to the wastewater during the groundwater treatment process. Since that time, all effluent chronic toxicity sampling results have achieved the final TMDL allocation of 1 TUc. Because the TMDL interim limits do not allow any decrease in current facility performance, the final TMDL allocation is applicable to the discharge from this facility and a limit of 1 TUc is established in this Order.

Performance Goals for Lead

The concentration-based waste load allocation for lead (42.7 µg/L) in the Harbor Toxics TMDL is less stringent than the limitations in the existing Order (2.59 µg/L average monthly and 5.19 µg/L maximum daily) and when used to calculate the effluent limits it results in less stringent effluent limitations. The Discharger has historically been in compliance with the limitations in the existing Order (sample ranges from non-detect (ND) to 0.28 µg/L). This Order therefore establishes the effluent limitations for lead based on the Harbor Toxics TMDL waste load allocations but also includes performance goals based on the effluent limitations in Order R4-2007-0029. The performance goals for lead are intended to ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification. These performance goals are not enforceable effluent limitations. They act as triggers to determine when treatment technologies fail to produce effluent concentrations consistent with historical levels.

Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program

The TMDL's implementation schedule allows up to 20 years after the TMDL effective date to attain WLAs and load allocations for those dischargers who justify the need for additional time in a compliance plan. During this period, the discharger is required, either individually or with a collaborating group, to develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in the Dominguez Channel Estuary. These plans shall follow the "TMDL Element – Monitoring Plan" provisions in Attachment A to Resolution No. R11-008. The Discharger must inform the Regional Board if they plan to join a

collaborative monitoring effort or develop a site specific plan no later than **90 days** after the effective date of this Order. If the Discharger is joining a collaborative effort that notification must include documentation of such. If developing a site specific monitoring plan, the plan must be submitted no later than **12 months** after the effective date of this Order for public review and, subsequently, Executive Officer approval. Monitoring shall begin 6 months after a monitoring plan is approved by the Executive Officer.

E. Other Plans, Policies and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

Effluent limitations for Discharge Point 001 in the previous Order were established for TSS, oil and grease, and BOD₅ because they are parameters typically used to characterize wastewater. Sulfides and constituents contributing to turbidity are commonly present in groundwater. In addition, acetone, phenolic compounds (chlorinated) and xylene may be found in discharges of treated groundwater. Therefore, all of these constituents are constituents of concern for which effluent limitations were evaluated and included in this Order.

The existing permit established effluent limitations for a number of pollutants believed to be present in the discharge of treated groundwater, but provided limited information about the basis for this determination. The storage tanks that were previously kept at the site and used as part of the industrial manufacturing processes contained volatile organic compounds (VOCs). Based on the consideration of new information, the new RPA determines that there is no reasonable potential for certain metals, such as arsenic, cadmium, chromium (VI), mercury, and silver, and no reasonable potential for VOCs such as phenols, benzene, carbon tetrachloride, 1,1-dichloroethane, 1,2-dichloroethane, 1,2-dichloroethylene, ethylbenzene, tetrachloroethylene, toluene, trichloroethylene, vinyl chloride and 1,4-dichlorobenzene. Effluent limits for these pollutants are not included in this Order.

Current operations at the Facility also include discharges of water generated from the occasional operation of the off-gas treatment system. The off-gas treatment system is used when either the optional air stripping towers or the optional soil vapor extraction system is operated. Two GAC beds, in series, were added to the treatment process in the first quarter of 2008 to address an excursion of VOCs, which may have been associated with the off-gas treatment system. Historical data shows some detections for 1,1,1-