APPENDIX L-1
HAZARDOUS MATERIALS

This appendix contains supporting documentation for the assessment of Hazardous Materials for the Supplement to the Final Environmental Impact Statement.
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Date: December 13, 2013  
File No. 21-0298 (IMJ)

Mr. Patrick Echols (email pechols@marincounty.org) and  
Mr. Lawrence Beaton (email lbeaton@marincounty.org)  
Marin County Dept. of Public Works  
P.O. Box 4186  
San Rafael, CA 94913

SUBJECT: Transmittal of Closure Letter for Marin County Airport - Gnoss Field  
451-A Airport Road, Novato, Marin County

Dear Messrs. Echols and Beaton:

Attached please find the uniform underground storage tank closure letter and the case closure  
summary for the subject site.

Based on the site specific information and data available in GeoTracker and the Regional Water  
Board’s case file, we conclude that this case meets all the criteria of the State Board’s Low-  
Threat Case Closure Policy and that a No Further Action determination is appropriate.

There may be residual petroleum-contaminated soil and groundwater at this site that could pose  
an unacceptable risk as a result of future construction/redevelopment activities, such as onsite  
evacuation activities or the installation of water wells at or near the site. Contractors performing  
subsurface activities at the site should be prepared to encounter soil and groundwater  
contaminated with petroleum hydrocarbons, and any encountered pollution should be managed  
properly to avoid threats to human health or the environment. Proper management may include  
sampling, risk assessment, additional cleanup work, mitigation measures, or some combination  
of these tasks.

If you have any questions, please contact John Jang of my staff at (510) 622-2366 [e-mail  
jjang@waterboards.ca.gov].

Sincerely,

[Signature]  
Digitally signed by Stephen Hill  
Date: 2013.12.13 13:10:25 -08'00'

Bruce H. Wolfe  
Executive Officer

[Stamp]
Attachments:
  Case closure letter
  Case closure summary

cc:

Sunil Ramdass,
SWRCB, UST Cleanup Fund Unit
(email sramdass@waterboards.ca.gov)

Scott Callow
(email scallow@marincounty.org)
Marin County Health Dept.
3501 Civic Center Drive, Room 236
San Rafael, CA 94903

Julia Barnes
(email jbarnes@marincounty.org)
Marin County Office of Waste Management
P. O. Box 4186
San Rafael, CA 94913-4186

Mr. John Calomiris (email corpmail@ecaenviron.com)
Edd Clark & Associates, Inc.
P. O. Box 3039
Rohnert Park, CA 94927-3039
Date: December 13, 2013
File No. 21-0298 (JMJ)

Mr. Patrick Echols (email pechols@marincounty.org) and
Mr. Lawrence Beaton (email lbeaton@marincounty.org)
Marin County Dept. of Public Works
P.O. Box 4186
San Rafael, CA 94913

SUBJECT: Closure Letter for Marin County Airport - Gnoss Field
451 – A Airport Road, Novato, Marin County

Dear Messrs. Echols and Beaton:

This letter confirms the completion of a site investigation and corrective action for the
underground storage tank(s) formerly located at the above-described location. Thank you for
your cooperation throughout this investigation. Your willingness and promptness in responding
to our inquiries concerning the former underground storage tank(s) are greatly appreciated.
Based on information in the above-referenced file and with the provision that the information
provided to this agency was accurate and representative of site conditions, this agency finds that
the site investigation and corrective action carried out at your underground storage tank(s) site is
in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the
Health and Safety Code and with corrective action regulations adopted pursuant to Section
25299.3 of the Health and Safety Code and that no further action related to the petroleum
release(s) at the site is required.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety
Code.

Please be aware that claims for reimbursement of corrective action costs submitted to the
Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or
issuance or activation of the Fund’s Letter of Commitment, whichever occurs later, will not be
reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case);
or
- Submission within the timeframe was beyond the claimant’s reasonable control, ongoing
work is required for closure that will result in the submission of claims beyond that time
period, or that under the circumstances of the case, it would be unreasonable or
inequitable to impose the 365-day time period.
Please contact our offices if you have any questions regarding this matter.

Sincerely,

Digitally signed by Stephen Hill
Date: 2013.12.13 13:09:44
-08'00'

Bruce H. Wolfe
Executive Officer
SITE CLOSURE SUMMARY

I. AGENCY INFORMATION

| Agency Name: SF Bay Regional Water Quality Control Board | Address: 1515 Clay Street, Suite 1400 |
| City/State/Zip: Oakland, CA 94612 | Phone: (510) 622-2300 |
| Responsible Staff Person: John Jang | Title: Water Resources Control Engineer |

II. SITE INFORMATION

| Site Facility Name: Marin County Airport/Gnoss Field |
| Site Facility Address: 451 Airport Road, Novato, California  Marin County |
| RB Case Nos.: 21-0298 | LOP Case No.: | Priority: Low |
| URF Filing Date: 06.26.95 | SWEEPS No.: NA |
| Responsible Parties (include addresses and phone numbers) |
| Marin County Department of Public Works |
| P.O. Box 4186 |
| San Rafael, California 94913 | Mr. Lawrence Beaton (415) 499-6412; Mr. Ken Robbins (415) 897-1754 |

<table>
<thead>
<tr>
<th>Tank No.</th>
<th>Size in Gallons</th>
<th>Contents</th>
<th>Closed In-Place/Removed?</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10,000</td>
<td>Jet fuel</td>
<td>Removed</td>
<td>September 1991</td>
</tr>
<tr>
<td>2</td>
<td>10,000</td>
<td>Aviation Gasoline</td>
<td>Removed</td>
<td>September 1991</td>
</tr>
<tr>
<td>3</td>
<td>10,000</td>
<td>Aviation Gasoline</td>
<td>Removed</td>
<td>September 1991</td>
</tr>
</tbody>
</table>

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

| Cause and Type of Release: Former USTs |
| Site characterization complete? Yes |
| Date Approved by Oversight Agency: 03.01.13 |
| Monitoring wells installed? No |
| Number: NA |
| Proper screened interval? NA |
| Highest GW Depth Below Ground Surface: 0.5 |
| Lowest Depth: 10 |
| Flow Direction: Easterly |
| Most Sensitive Current Use: Airport |
| Most Sensitive Potential Use: Residential |
| and Probability of Use: Low |
| Are drinking water wells affected? No |
| Aquifer Name: |
| Is surface water affected? No |
| Nearest SW Name: Unnamed drainage ditch, 550' W/NW |
| Off-Site Beneficial Use Impacts (Addresses/Locations): None |
| Report(s) on file? Yes |
| Where is report(s) filed? SFBRWQCB, MCOWM, & Geotracker |

<table>
<thead>
<tr>
<th>Material</th>
<th>Amount (Include Units)</th>
<th>Action (Treatment or Disposal w/Destination)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanks</td>
<td>2 (unknown quantity)</td>
<td>Reportedly inerted, filled with concrete slurry and closed in-place (other details unknown)</td>
<td>~1986</td>
</tr>
<tr>
<td></td>
<td>(3) 10kgal</td>
<td>Removed, transported, cleaned, cut with holes by Petro-Tech, disposed offsite. Disposal location unknown</td>
<td>Sep 1991</td>
</tr>
<tr>
<td>Piping</td>
<td>unknown</td>
<td>Removed and handled along with USTs</td>
<td>Sep 1991</td>
</tr>
<tr>
<td>Free Product</td>
<td>None reported</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Soil</td>
<td>Sewer line replacement (63 tons)</td>
<td>Browning-Ferris Industries, Livermore, CA</td>
<td>08.12.99</td>
</tr>
<tr>
<td></td>
<td>2 55-gallon drums</td>
<td>Disposed at North State Environmental, San Francisco, CA</td>
<td>02.19.10</td>
</tr>
<tr>
<td>Groundwater</td>
<td>Sewer line replacement (9500-gallons)</td>
<td>Alviso Independent Oil Facility, Alviso, CA</td>
<td>07.15.99 &amp; 07.16.99</td>
</tr>
<tr>
<td>Barrels</td>
<td>2 55-gallon drums</td>
<td>Disposed at North State Environmental, San Francisco, CA</td>
<td>02.19.10</td>
</tr>
<tr>
<td>POLLUTANT</td>
<td>Soil (ppm) Before</td>
<td>Soil (ppm) After</td>
<td>Water (ppb) Before</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------</td>
<td>------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>TPHg</td>
<td>570</td>
<td>ND&lt;1.0</td>
<td>7,900</td>
</tr>
<tr>
<td>TPHd</td>
<td>750</td>
<td>12</td>
<td>5,900</td>
</tr>
<tr>
<td>TPHmo</td>
<td>1,300</td>
<td>12</td>
<td>ND&lt;5000</td>
</tr>
<tr>
<td>TPHk</td>
<td>750</td>
<td>7.3</td>
<td>820</td>
</tr>
<tr>
<td>TPHbo</td>
<td>1,300</td>
<td>15</td>
<td>4,000</td>
</tr>
<tr>
<td>TPHjg</td>
<td>12</td>
<td>7.3</td>
<td>30,000</td>
</tr>
<tr>
<td>TPHag</td>
<td>NA</td>
<td>ND&lt;1.0</td>
<td>NA</td>
</tr>
</tbody>
</table>

Comments (Depth of Remediation, etc.):
"Before" soil concentrations are from either the confirmation samples collected at UST removal or soil boring program conducted in May and/or July 1995 or the 1999 storm sewer replacement project (prior to off-site soil disposal).
"After" soil concentrations based on samples collected during the January 2010 soil boring program.
"Before" groundwater concentrations are from either the UST removal in 1991 or investigations conducted in May and/or July 1995 or the 1999 storm sewer replacement project.
"After" groundwater concentrations based on samples collected during the January 2010 investigation.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **Yes**

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **Yes**

Does corrective action protect public health for current land use? **Yes**

Site Management Requirements: There may be residual contamination in both soil and groundwater at the site that could pose an unacceptable risk under certain development activities such as site grading, excavation, or installation of water wells. Therefore, the impact of the disturbance of any residual contamination or the installation of a water well near the residual contamination should be assessed and appropriate action taken so that there is no significant impact to human health, safety or the environment. This could necessitate additional sampling, health risk assessment, and mitigation measures. The Marin County Health Dept., Public Works Dept., and the appropriate planning and building departments should be notified prior to any changes in land use, grading activities, excavation, and installation of water wells. This notification should include a statement that residual contamination may exist on the property and list all mitigation actions, if any, necessary to ensure compliance with this site management requirement. Future subsurface activities should be prepared for possibly encountering residual soil and/or groundwater pollution and that any encountered pollution must be managed in a proper manner. The levels of residual contamination and any associated site risks are expected to reduce with time.
V. TECHNICAL REPORTS, CORRESPONDENCE, ETC., THAT THIS CLOSURE RECOMMENDATION WAS BASED UPON

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Receptor Survey, EC&amp;A</td>
<td>09.29.09</td>
</tr>
<tr>
<td>Workplan: Soil and Groundwater Investigation</td>
<td>09.29.09</td>
</tr>
<tr>
<td>Summary Report, Soil and Groundwater Investigation, ECON</td>
<td>03.10.10</td>
</tr>
<tr>
<td>Report: Cleanup of Storm Drain Site, EC&amp;A</td>
<td>09.24.99</td>
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<tr>
<td>Low-Threat Site Closure Evaluation, EC&amp;A</td>
<td>06.06.13</td>
</tr>
<tr>
<td>Notice of Intent to Issue a No Further Action Letter, SFBRWQCB</td>
<td>07.10.13</td>
</tr>
<tr>
<td>Letter re: IDW certification, Marin Co. Dept. of Public Works</td>
<td>10.15.13</td>
</tr>
</tbody>
</table>

VI. ADDITIONAL COMMENTS, DATA, ETC.

PLEASE INCLUDE/ATTACH THE FOLLOWING AS APPROPRIATE:
1) SITE MAP INDICATING TANK PIT LOCATION, MONITORING WELL LOCATION, GROUNDWATER GRADIENT, ETC.; AND
2) SITE COMMENTS WORTHY OF NOTICE (E.G., AREA OF RESIDUAL POLLUTION LEFT IN PLACE, DEED NOTICES ETC.)

Gross Field is a small airport in Novato constructed on filled wetlands and is surrounded by open fields and marshlands. One jet fuel and two aviation gasoline USTs were removed in 1991. The USTs and product lines were pitted and had holes in them. Two grab groundwater (GW) samples from the UST pit contained up to 7,900 ppb of TPH-g, 5,900 ppb of TPH-d, and 130 ppb of benzene. Four borings were installed on May 31, 1995, and nine additional borings were installed on July 5, 1995. Grab GW samples from the borings contained up to 1,100 ppb of TPH-d, 810 ppb of TPH-g, 4,000 ppb of total petroleum hydrocarbons as bunker C fuel (TPH-b), 30,000 ppb of jet fuel (TPH-jf), and 51 ppb of benzene. Soil samples contained up to 1,300 mg/kg of motor oil (TPH-mo) with low concentrations of TPH-g, TPH-d, TPH-b, and benzene.

In 1999 during excavation work to replace a section of the storm drain sewer line, GW with a sheen and solvent-like and petroleum odors were encountered. Sixty three tons of soil and 9,600 gallons of GW were subsequently removed from the excavation and transported off-site to proper disposal facilities. Soil samples of the excavated soil contained up to 570 mg/kg of TPH-g, 750 mg/kg of TPH-d, 750 mg/kg of TPH-kerosene, 1,100 mg/kg of TPH-mo, 1,300 mg/kg of TPH-b, and non-detectable concentrations of benzene. Soil confirmation samples from the final limits of the excavation contained much lower concentrations of the aforementioned compounds. A grab GW sample from the excavation contained 960 ppb of TPH-g, 890 ppb of TPH-d, 820 ppb of TPH-k, 1,100 ppb of TPH-b, 1.4 ppb of benzene, and non-detectable concentrations of TPH-mo and MTBE.

A 2009 sensitive receptor survey (SRS) indicates that the site is surrounded by wetland/saltwater marsh surface water bodies with the nearest surface water body being an unnamed drainage ditch located 550 feet west-southwest of the former USTs and a strip of marsh that is 1,050 feet south of the former USTs. The SRS indicated that there were no water wells within 1,000 feet of the former USTs.

An additional subsurface investigation conducted January 28, 2010, included the collection and analysis of soil and GW samples from ten soil borings (B-14 through B-23, Plate 2) advanced around the former USTs and beyond the locations of borings drilled in 1995. Following completion of the investigation, the following conclusions were presented:
Although constituents of concern were detected in select soil samples, all concentrations were below the ESLs for shallow soil as established by the San Francisco Water Board, where GW is not a current or potential drinking water resource. Further, TPH detected in soil during the 1995 investigation were below ESL’s.

Soil impacted with petroleum hydrocarbons likely remains in the area immediately surrounding the former USTs. Concentrations present in soil samples collected in 2010 are generally lower than those collected closer to the former USTs in 1995.

The lateral and vertical distribution of contamination in GW has been defined to the east, south and west of the former UST excavation area. A GW sample collected from a boring (B-21) located to the north of the former UST’s contained concentrations of TPH above SF Bay ESL’s; however, the concentration is significantly lower than a sample collected closer to the tank excavation in 1995 indicating the 2010 boring (B-21) is located close to the northerly extent of GW contamination.

With the exception of B21-W and two other samples containing toluene below SF Bay ESLs, all GW samples were non-detect for constituents of concern.

Though 18 years have passed since the 1995 investigation, contaminants in GW were not detected, or in one case have decreased significantly, in the step out borings.

The distribution and spread of soil and GW impacts does not appear to be influenced by nearby subsurface utilities.

According to the SRS, no municipal or private wells are located within 1000 feet of the site.

Based on the following, case closure for this site is considered to be appropriate: (1) The site has been adequately investigated; (2) The primary source (the three USTs that formerly occupied this site) was removed in 1991; (3) The secondary source (the impacted soil surrounding the former USTs) material has been removed to the degree practicable and disposed of offsite; (4) The lateral extent of FHC-impacted soil and groundwater has been adequately characterized and the GW plume is stable or decreasing and is localized and not migrating off-site; (5) Sensitive receptors and migration pathways that could be impacted by the release have been identified and are not impacted or threatened by the residual pollution; (6) The absence of benzene and very low concentrations of toluene, ethylbenzene, and xylenes in soil and groundwater, and the location of the residual FHC impacts beneath paving and outside of building footprints, precludes a potential vapor intrusion problem; and (7) There is little likelihood that the shallow groundwater will be used as a drinking water supply in the near future. The use of the subject site as an airport is not likely to change in the future. There is a small but easily manageable risk to human health if excavation/construction activities are conducted in the vicinity of the former USTs excavation. The potential risk would be mitigated by preparing a Soil and Groundwater Management Plan (SGMP). The SGMP would describe procedures to notify the appropriate regulatory agencies, protect worker’s health, and manage impacted soil and/or groundwater if it is encountered; and (8) The residual concentrations in the soil and groundwater apparently do not represent a current or future public health, ecological, and water resources threat at the Site.

This document and the related CASE CLOSURE LETTER shall be retained by the lead agency as part of the official site file.
Approximate Scale (feet)

Former Tank Locations Approximated

from Artesian Environmental

EDD CLARK & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

Collapsed Storm Drain
Marin County Airport/Gnoss Field
451 Airport Road
Novato, CA. 94948

PLATE

0343,001.99 REVIEWED BY DATE REVISED DATE

09/99
Explanation

- Excavation Limit (1999)
- Excavation Limit (1991)
- Former UST

Borings
- 2010 Boring
- 1999 Boring
- 1995 Boring

TPH Concentrations
- Line of Equal TPH Concentration
- Approximate Line of Equal TPH Concentration
- 320 TPH Concentration in µg/L

Underground Utilities
- Storm Sewer
- Water Line

Note: 210 µg/l - SFBRWQCB ESL for TPH in groundwater (Table F1b).