



**GROUNDWATER CORRECTIVE MEASURES  
IMPLEMENTATION (CMI) CERTIFICATION  
REPORT**

Loveland Products, Inc. (LPI) Facility  
1525 Lockwood Road  
Billings, MT 59101

November 19, 2025  
*Amended December 29, 2025*

**Submitted To:**

Denise Kirkpatrick  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620

**Prepared for:**

Nutrien Ag Solutions, Inc.  
5296 Harvest Lake Dr.  
Loveland, CO 80538

**Prepared by:**

Rubik  
320 Flint Street  
Reno, NV 89501

**Prepared By:**

A blue ink signature of Shane P. Fitch, consisting of stylized, overlapping letters.

Shane P. Fitch, PG  
Principal Hydrogeologist

**Reviewed and Approved By:**

A blue ink signature of Todd Leonard, consisting of stylized, overlapping letters.

Todd Leonard  
Senior Principal

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## 1.0 INTRODUCTION

On behalf of Nutrien Ag Solutions, Inc. (Nutrien), Rubik prepared this Groundwater Corrective Measures Implementation (CMI) Certification Report for the Loveland Products, Inc. (LPI) facility located at 1525 Lockwood Road in Billings, Montana (the Site). LPI is a subsidiary of Nutrien.

This report was prepared pursuant to Section VIII Part B.3.a of the Montana Department of Environmental Quality (DEQ) 2015 Corrective Action Order on Consent (CAO) MHWCAO-15-01 for the Site (DEQ, 2015a).

### 1.1 Objective

The objective of this report is to certify that the Site-wide groundwater corrective measures for the Site have been implemented and completed in accordance with the 2017 Final Groundwater Corrective Measures Implementation Work Plan (CMI WP; Rubik, 2017).

## 2.0 SITE DESCRIPTION

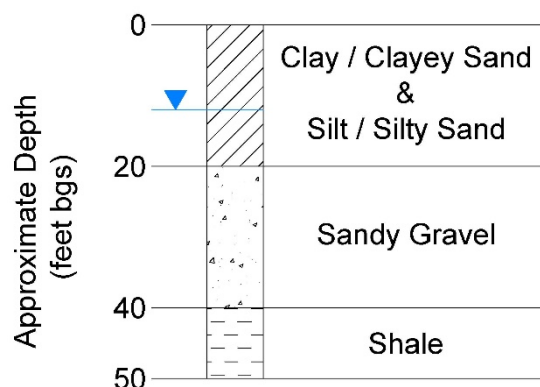
### 2.1 Site Description

LPI operated an herbicide formulation plant at the Site from 1975 to 2020. The primary herbicides formulated consisted of 2,4-dichlorophenoxyacetic acid (2,4-D), MCPA (4-chloro-2 methylphenoxy acetic acid), MCPP (2-(4-chloro-2 methylphenoxy)-propanoic acid), dicamba, glyphosate, and fluroxypyr. The pesticide formulation activities were suspended in October 2020. Since that time, LPI has used the facility to store and distribute pre-packaged and bulk agricultural products.

The Site is zoned for heavy industrial use and is exclusively used for industrial purposes (CBPD, 2025). A Site Vicinity Map and Site Map are presented as **Figures 1** and **2**, respectively.

### 2.2 Geology

The geology beneath the Site is summarized below.



A map identifying geologic cross section locations is presented as **Figure 3**, and the cross sections are presented as **Figures 4** and **5**.

## 2.3 Hydrogeology

Groundwater beneath the Site occurs within the semi-confined sandy gravel between approximately 20 and 40 feet below the ground surface (bgs). The Site monitoring wells are screened in the sandy gravel. The depth to water in the monitoring wells has historically ranged from approximately 7 to 20 feet bgs and Site-wide groundwater has consistently flowed to the north at an average gradient of 0.007 feet per foot. The Coulson Ditch, an unlined man-made irrigation ditch located along the northern property boundary, appears to have little to no effect on groundwater flow (AECOM, 2010; Rubik, 2017).

Construction details for current monitoring wells are presented in **Table 1**, and the well locations are depicted on **Figure 2**. Historical groundwater elevation data are provided in **Table 2** and groundwater elevations and contours from the November 2024 groundwater monitoring and sampling (M&S) event are presented on **Figure 6**. A rose diagram depicting historical groundwater flow directions is also presented on **Figure 6**.

## 3.0 ENVIRONMENTAL BACKGROUND

### 3.1 Surface Impoundments

Between 1979 and 1985, wastewater from the herbicide formulation process was discharged to three on-site, lined evaporation ponds collectively referred to as the Surface Impoundment (DEQ, 2015a). The liners of two of the impoundments, B and C, were found to have failed in 1980 (impoundment C) and 1981 (impoundment B). Both impoundments were subsequently reconstructed using high density polyethylene liners and returned to service in 1983 and 1984, respectively. (US EPA, 1990; Terracon, 1996).

In 1986, the Surface Impoundment was closed by LPI in accordance with an approved RCRA closure plan (LSE, 1991). The closure activities consisted of removing the liquids, stabilizing the bottom sludge with fly ash, and capping the areas with polyethylene liners overlain by sand and compacted gravel. The Surface Impoundment closure was certified by the DEQ in 1987, and the caps were paved over with asphalt in 1991 (DEQ, 2015a).

The locations of the former surface impoundments are shown on **Figure 7**.

### 3.2 RCRA Facility Assessment

In 1990, a Resource Conservation and Recovery Act (RCRA) facility assessment (RFA) identified solid waste management units (SWMUs) and areas of concern (AOCs) that required additional assessment (PRC, 1990).

The locations of the SWMUs and AOCs identified in the RFA are depicted on **Figure 7** and descriptions of each area and their current status are presented in **Appendix A**. The former Surface Impoundment was identified in the RFA as SWMU-6, and Site-wide groundwater was identified as SWMU-7.

### 3.3 Hazardous Waste Permit and Corrective Action Order

In December 1992, Montana Hazardous Waste Permit #MWHP-92-01 was issued by the DEQ to establish the post-closure care requirements for the Surface Impoundment (DEQ, 2015a). Also in December 1992, a separate hazardous waste permit was issued jointly by the EPA and DEQ, which required LPI to investigate the SWMUs/AOCs identified in the RFA and complete corrective measure studies for the areas (DEQ, 2010, Terracon, 1996).

In 2000, the DEQ became the primary agency responsible for enforcement of both permits. In 2004, Permit MWHP-92-01 was reissued by DEQ as Permit MWHP-04-01, which combined the requirements from the previous two hazardous waste permits. Permit MWHP-04-01 was replaced by the CAO in 2015.

#### 3.3.1 Deferred Areas

Investigation of four SWMUs and one AOC located beneath concrete floors or a loading dock was deferred until plant closure or construction, as specified in the Permit and CAO (DEQ, 2004, 2015a). These areas were designated as “Deferred Units” in the Permit and CAO.

### 3.4 RCRA Facility Investigations

RCRA facility investigations (RFIs) were completed between 1996 and 2002 to evaluate the presence and distribution of the chemicals in the SWMUs and AOCs (Terracon, 1996; Pentacore, 2002). Based on the results of the RFIs, no further action was required at six SWMUs and three AOCs (AECOM, 2008). The Deferred Units were not investigated during the RFIs.

### 3.5 Soil Corrective Measures Study / Statement of Basis

In 2008, a Soil Corrective Measures Study (CMS) was conducted to assess the remaining SWMUs and AOCs, excluding the Deferred Units, and identify corrective measure alternatives (AECOM, 2008).

The CMS included a risk assessment that compared concentrations of the chemicals of potential concern (COPCs) in soil to site-specific Risk-Based Action Levels (RBALs) for industrial receptors. Only the MCPA concentration detected in one sample (SA1-15) exceeded the RBAL. The 2,4-D concentration in the same sample exceeded the EPA screening level. The exceedances occurred north of the former wastewater tank containment (identified as Area SA1-15 in **Appendix A**). Excavation and offsite disposal of the impacted soil was identified in the CMS as the preferred corrective measure.

Based on the modeling and soil leaching evaluation presented in the CMS, it was concluded that the soil to groundwater migration pathway was incomplete.

In the 2010 Statement of Basis, DEQ indicated that excavation was the appropriate corrective measure for the soil with screening level exceedances at Area SA1-15. The DEQ also agreed that the soil-leaching-to-groundwater pathway is not a concern at the Site and no further action is required for this pathway (DEQ, 2010 and 2015a).

### 3.6 Soil Excavation and DEQ Soil Closure

In August 2010, the soil containing MCPA and 2,4-D concentrations exceeding the screening levels was excavated at Area SA1-15 and the impacted soil was disposed of offsite at a permitted facility. The soil corrective measures for all areas but the Deferred Units were certified as complete in 2011 and no further action was required (Sig Ross, 2011; DEQ, 2015a).

### 3.7 Surface Impoundment Removal

In 2012, the caps were removed from the former Surface Impoundment (SWMU-6) and the underlying solidified sludge and soil was excavated to prepare for construction of a new warehouse over the area. The excavated material from the Surface Impoundment was approved by DEQ as corrective action management unit (CAMU) eligible and disposed of at an off-site RCRA permitted hazardous waste disposal facility (AECOM, 2012b). Confirmation samples were collected at the extents of the excavation and results confirmed that concentrations of 2,4-D in remaining soil were below the EPA Regional Screening Levels (RSLs) for industrial receptors (AECOM, 2012b).

### 3.8 SWMU-6 Investigation & Risk Assessment

The presence of the permitted post-closure Surface Impoundment had precluded investigation of SWMU-6 during the RFI process. During removal of the Surface Impoundment, soil samples were collected at the same time as the excavation confirmation samples to identify and quantify residual chemicals in the soil in SWMU-6. The investigation samples were analyzed for a broader set of analytes (chlorinated herbicides, volatile and semi-volatile organic compounds [VOCs and SVOCs]). The COPCs were identified by comparing detected concentrations or reporting limits (RLs) to industrial RSLs. Prior to construction of the warehouse, a risk assessment was conducted to evaluate the potential risks to industrial workers via the direct contact and vapor intrusion exposure pathways. The assessment indicated that residual COPC concentrations in the soil at SWMU-6 did not present an unacceptable risk to industrial workers (Rubik, 2013a).

### 3.9 Deferred Unit Closure

In 2022, soil samples were collected from beneath the concrete floors and loading dock in the Deferred Units and analyzed for all historical Site COPCs. Based on the investigation results and a 2023 risk assessment, the DEQ determined that no further action was required at the deferred SWMUs and AOC (Rubik, 2022; DEQ, 2023; Rubik, 2023).

### 3.10 Groundwater Monitoring & Sampling

Groundwater monitoring and sampling has been conducted at the Site since the early 1980s, when the leaks in the former Surface Impoundment liners were discovered.

Historical groundwater analytical data are presented in **Tables 3** and **4**. The locations of current and historical wells are shown on **Figure 8**.

### 3.11 Groundwater Remediation

**1983 – 1987:** A groundwater pump and treat (P&T) remediation system was operated at the Site from 1983 to 1987 to address herbicide-impacted groundwater downgradient of

SWMU-6. Groundwater extracted from pumping wells was routed through carbon vessels to remove 2,4-D and phenols, then reinjected into the aquifer through on-site upgradient injection wells (LSE, 1989).

**1987 – 1996:** In 1987, a remediation system consisting of extraction wells, an aeration sump, and injection wells was installed to limit migration of the groundwater plume and enhance aerobic biodegradation of the COPCs (LSE, 1991).

Increased microbial populations and dissolved iron concentrations in the groundwater, particularly near monitoring well OBS-2, caused the injection well screens to plug and the system was shut down in 1996 (AECOM, 2012a).

**1996 – 2003:** A new remediation system was installed in 1996 that routed extracted and aerated groundwater into an infiltration trench located south of SWMU-6 to enhance biodegradation of the COPCs (RETEC, 2006).

The system was shut down in 2003 after the COPCs concentrations had been reduced and the remaining impacts in groundwater were limited to isolated areas beneath the Site.

**2008:** In 2008, a pilot test was conducted to determine if an iSOC® (in situ Submerged Oxygen Curtain) technology could be used to reduce herbicide-related COPC concentrations in the groundwater through enhanced aerobic biodegradation. The test was also conducted to determine if arsenic concentrations in groundwater could be reduced by increasing its sorption to mineral surfaces through the conversion of arsenite to arsenate (AECOM, 2008, 2010).

The test indicated that COPC concentrations in groundwater, including arsenic, could be reduced with iSOC® technology (AECOM, 2012a; DEQ, 2015b).

**2010:** In March 2010, an iSOC® unit was installed in well OBS-2. Concentrations of arsenic in the well were reduced to below the DEQ-7 standard (DEQ, 2019a). Concentrations of MCPP were also reduced over time.

**2012:** In August 2012, an iSOC® unit was installed in well M-12. Concentrations of arsenic were reduced to below the DEQ-7 standard. Concentrations of MCPP were also reduced over time.

Many of the historical remediation wells were later converted to monitoring wells. The remediation well construction details and descriptions of their use over time are presented in **Table 5**.

### **3.12 Groundwater Corrective Measures Study**

In 2012, a Groundwater CMS was conducted to identify the preferred options to achieve the following corrective action objectives:

- Prevent unacceptable exposures to human health and the environment from impacted groundwater beneath the Site; and

- Reduce COPC concentrations in Site-wide groundwater to below DEQ-7 standards, or the RSL or risk-based levels if there was no DEQ-7 standard (AECOM, 2012a; DEQ, 2015b).

A CMS Addendum was submitted to the DEQ in 2013 to provide additional information for determining the preferred corrective measures. This information included:

- A description of the SMWU-6 excavation;
- Recognition that the DEQ-7 standard for MCPP was increased in October 2012 from the previous standard of 7 micrograms per liter ( $\mu\text{g/L}$ ) to 300  $\mu\text{g/L}$ ; and
- Notification that MCPP concentrations in the groundwater beneath the Site had been below the new DEQ-7 standard since at least 2004 (Rubik, 2013b).

The CMS and Addendum concluded that monitored natural attenuation (MNA) combined with institutional controls (ICs) to limit Site-wide groundwater use and localized enhanced bioremediation with iSOC<sup>®</sup> when water quality standards were exceeded, were the preferred corrective measures (AECOM, 2012a; Rubik, 2013b).

### **3.13 DEQ Statement of Basis and Final Determination**

In their Statement of Basis and Final Determination Letter for Groundwater Remedy Selection, the DEQ concluded that the corrective measures recommended in the 2012 Groundwater CMS and 2013 Addendum would meet the corrective action objectives for the facility (DEQ, 2015b, 2015c).

### **3.14 Groundwater CMI Work Plan**

In accordance with the CAO, the CMI WP was developed in 2016 and amended in 2017 to establish the plan to:

- Implement the corrective measures,
- Evaluate the effectiveness of the corrective measures, and
- Confirm of when the corrective action objectives were met (Rubik 2017).

#### **3.14.1 Chemicals of Potential Concern**

The COPCs for groundwater beneath the Site were defined in the CMI WP as:

- Phenoxy acid herbicides: 2,4-D, MCPP, and MCPA;
- Total phenolics, the breakdown products of the phenoxy acid herbicides;
- Other herbicides formulated or processed at the Site: dicamba, diallate, clopyralid, picloram, and triallate; and
- Arsenic.

Although arsenic was not related to the herbicide formulation operations at the facility, fly ash, which commonly contains arsenic, was used to stabilize the sludge in the bottom of the Surface Impoundment when it was closed in 1986. The stabilized sludge was removed in 2012.

## 4.0 GROUNDWATER CORRECTIVE MEASURES IMPLEMENTATION

### 4.1 Groundwater Monitoring and Sampling

Semi-annual groundwater monitoring and sampling has been conducted at the Site since 2016 to:

- Evaluate Site-wide groundwater quality by comparing COPC concentrations to DEQ-7 standards (or the EPA RSL for diallate until the DEQ-7 standard was established in 2019);
- Identify wells where iSOC® technology was required to reduce COPC concentrations to below the water quality standards;
- Verify COPC concentrations were consistently below the water quality standards; and
- Monitor natural attenuation to confirm COPCs in the groundwater beneath the Site do not present a risk to health and the environment

The construction details for the current monitoring well network are provided in **Table 1**. Groundwater analytical data for the wells are presented in **Table 4**. The long-term groundwater monitoring and iSOC performance monitoring plan, including COPC Cleanup Levels, is provided in **Table 6**.

#### 4.1.1 DEQ-7 Standard Exceedances and iSOC Treatment

Since at least 2016, the only COPCs that have been detected at concentrations exceeding the current DEQ-7 standards are diallate, MCPA, MCPP, and arsenic as described below.

**Diallate:** Diallate has only been detected once at a concentration exceeding the current DEQ-7 standard. The exceedance was detected in well MW-3 in November 2016 and diallate was not detected during the preceding M&S event in May 2016 and the following event in December 2016. Diallate concentrations have not exceeded the DEQ-7 standard since the November 2016 exceedance.

Graphs of diallate concentrations in MW-3 over time are presented in **Appendix B**.

**MCPA:** Concentrations of MCPA have only periodically exceeded the DEQ-7 standard during single M&S events since 2016. The exceedances did not occur during the same events, or in the same wells. MCPA was not detected in groundwater samples collected prior to and after the single exceedances. MCPA concentrations in Site-wide groundwater have not exceeded the DEQ-7 standard since 2021 in well MW-3.

In March 2017, an MCPA concentration exceeding the DEQ-7 standard was detected in well OBS-1. MCPA was not detected in the well prior to this event. The iSOC® unit was installed in the well in June 2017 and operated until 2020. No MCPA has been detected in well OBS-1 since the March 2017 event.

Graphs of MCPA concentrations over time in wells that have had an exceedance are presented in **Appendix B**.

**MCP**: Since 2016, MCP has only been detected once at a concentration exceeding the current DEQ-7 standard. The exceedance was detected in well OBS-1 in November 2018, during the time the iSOC® unit was in the well. MCP was not detected during the next M&S event in May 2019 and concentrations have consistently been one to two orders of magnitude less than the DEQ-7 standard since the exceedance occurred.

Graphs of MCP concentrations over time in OBS-1 are presented in **Appendix B**.

**Arsenic**: The highest arsenic concentrations were historically detected in well OBS-2 and prior to 2010 concentrations routinely exceeded 200 µg/L. After the iSOC® unit was installed in the well in 2010, arsenic concentrations decreased by an order of magnitude. Arsenic concentrations continued to decline after the system was removed. By November 2017, arsenic concentrations in OBS-2 were less than the DEQ-7 standard of 10 µg/L and since November 2019 arsenic has remained below the standard.

Well OBS-1 is located downgradient of well OBS-2. The iSOC® unit was installed in the well from June 2017 to November 2020. Arsenic concentrations in OBS-1 were similar before and after iSOC® treatment (~12 µg/L), however since 2021 arsenic concentrations steadily declined. Arsenic concentrations have consistently been below the standard in well OBS-1 since 2023.

The arsenic concentrations in onsite well MW-3 located downgradient of well OBS-1 have consistently been below the DEQ-7 standard since the well was installed in 2016, with the exception of an anomalous detection in November 2019. Arsenic concentrations in the downgradient offsite well M-3BA have been less than the standard since 2013.

Graphs of arsenic concentrations over time in these wells are presented in **Appendix B**.

#### **4.1.2 Monitored Natural Attenuation**

The groundwater data collected from the monitoring wells indicate that, in wells where DEQ-7 standards were exceeded, COPC concentrations remained below the standard long after iSOC® treatment ended. The analytical data also indicate that COPCs are not migrating in the groundwater beneath the Site, that natural attenuation is occurring, and the corrective action objectives have been achieved.

#### **4.2 Data Validation**

Validation of the laboratory analytical data was completed during each M&S sampling event and the results of the validation were included in the semi-annual M&S reports. The data validation process included:

- Ensuring the method detection limits were less than the applicable standards;
- Reviewing the laboratory analytical reports for qualifiers and conformance with holding times;
- Determining if qualified data met the data quality objectives (DQOs) and
- Evaluating analytical precision, accuracy, and completeness of the data.

All groundwater analytical data for samples collected in accordance with the CMI WP met the DQOs.

#### **4.3 Institutional Controls**

A Declaration of Environmental Control Easement (ECE) was established for the Site in 2019. The ECE restricts property use to industrial purposes only and use of groundwater for industrial and monitoring purposes only. The ECE declaration is tied to the property's deed and ensures that future property owners are aware of the use restrictions and human health and the environment are protected. A copy of the ECE is attached as **Appendix C**.

#### **5.0 GROUNDWATER CORRECTIVE MEASURES COMPLETION**

The corrective action objectives from the 2012 Groundwater CMS and 2017 Groundwater CMI WP have been achieved. In accordance with the CAO (DEQ, 2015a), this report certifies that groundwater corrective measures have been completed for the Site and no further action is required. Additional certification of groundwater corrective measures completion has been provided by an independent Montana-licensed Professional Engineer and is provided as **Appendix D**.

## 6.0 REFERENCES

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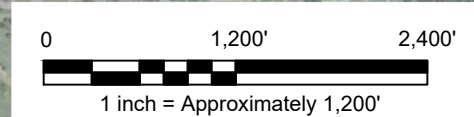
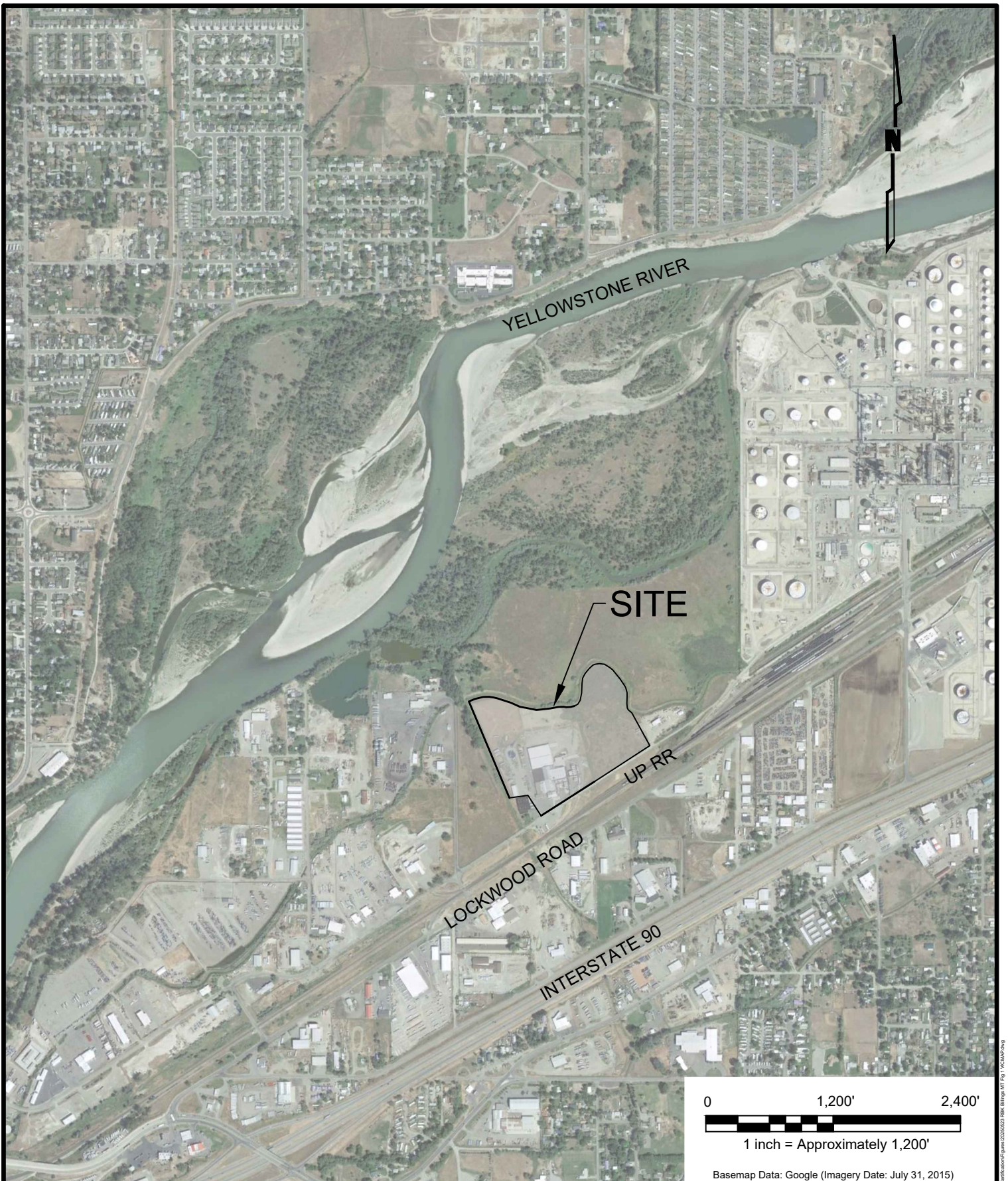
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**FIGURES**

**GROUNDWATER CMI CERTIFICATION REPORT**

LPI Billings Facility  
Billings, Montana

November 2025



Basemap Data: Google (Imagery Date: July 31, 2015)



320 Flint Street  
 Reno, Nevada 89501  
 (775) 622-0857

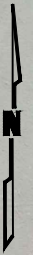
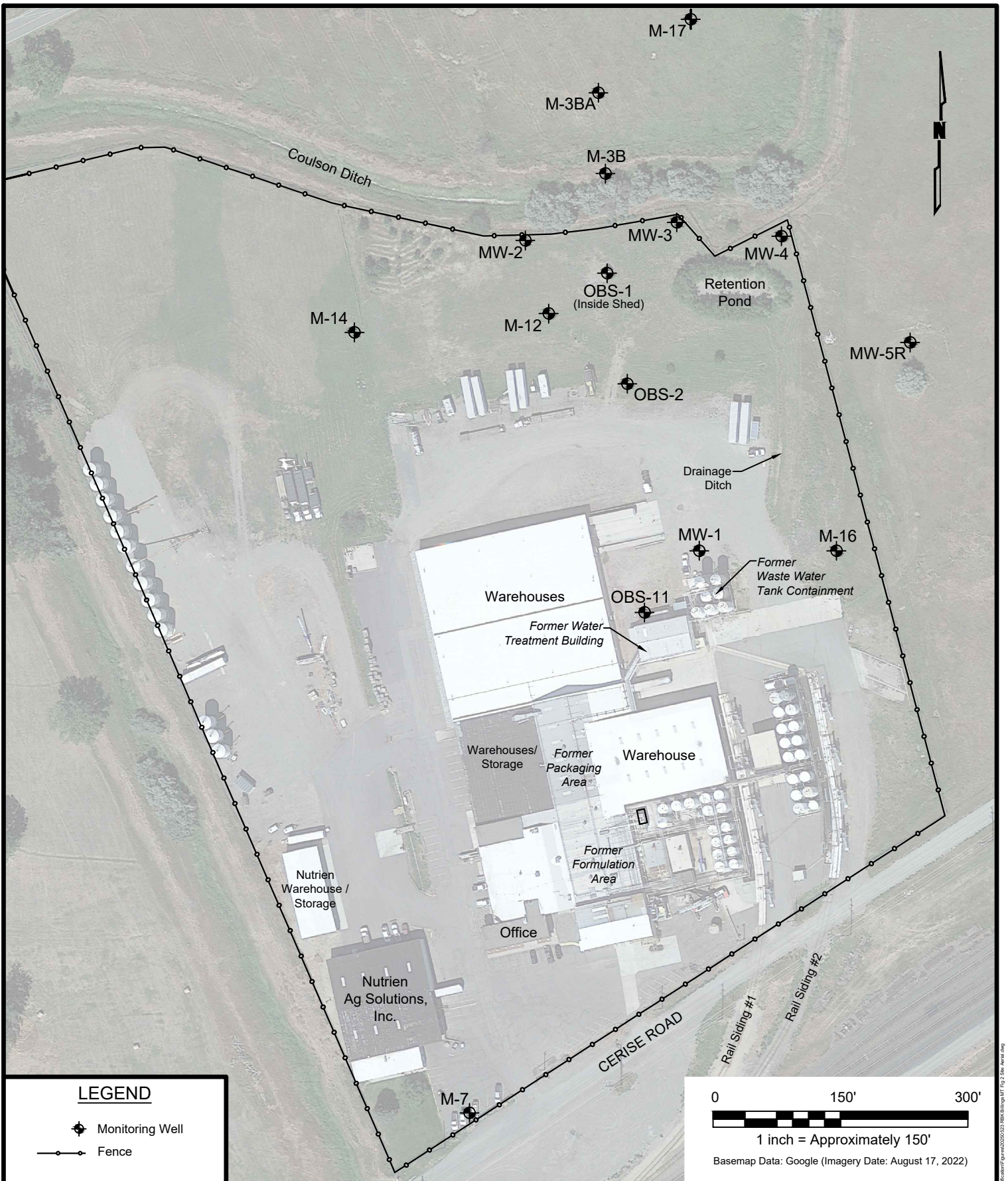
### VICINITY MAP

LPI BILLINGS  
 1525 LOCKWOOD ROAD  
 BILLINGS, MONTANA



DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: TLL
DATE: 6/10/2025	ACAD FILE: 202503 RBR Billings MT Fig 1 VICMAP.dwg	
PROJECT NO.: 03005-2025	PLOT SCALE: Approx. 1" = 1,200'	

**FIGURE 1**

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**LEGEND**

-  Monitoring Well
-  Fence

0 150' 300'



1 inch = Approximately 150'

Basemap Data: Google (Imagery Date: August 17, 2022)



320 Flint Street  
Reno, Nevada 89501  
(775) 622-0857

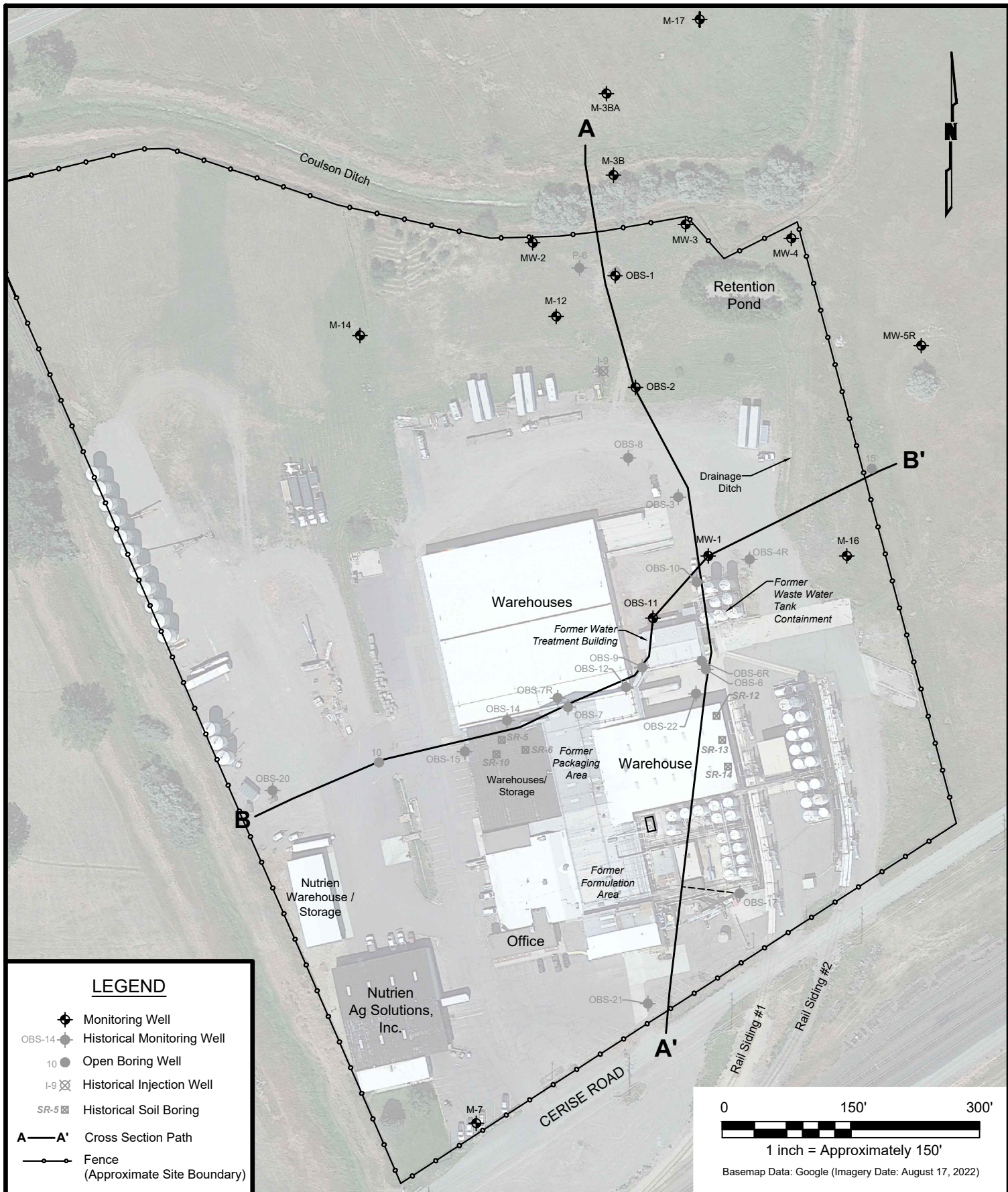
**SITE MAP**

LPI BILLINGS  
1525 LOCKWOOD ROAD  
BILLINGS, MONTANA

DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: SPF
DATE: 7/28/2025	ACAD FILE: 20250728 LPI Rubik Billings M7 Fig 2 Site Aerial.dwg	
PROJECT NO.: 03005-2025	PLOT SCALE: APPROX. 1" = 150'	

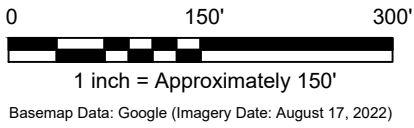
**FIGURE 2**

LPI-BILLINGS-20250728-001-002-003-004-005-006-007-008-009-010-011-012-013-014-015-016-017-018-019-020-021-022-023-024-025-026-027-028-029-030-031-032-033-034-035-036-037-038-039-040-041-042-043-044-045-046-047-048-049-050-051-052-053-054-055-056-057-058-059-060-061-062-063-064-065-066-067-068-069-070-071-072-073-074-075-076-077-078-079-080-081-082-083-084-085-086-087-088-089-090-091-092-093-094-095-096-097-098-099-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000



**LEGEND**

- Monitoring Well
- Historical Monitoring Well
- Open Boring Well
- Historical Injection Well
- Historical Soil Boring
- A—A'** Cross Section Path
- Fence (Approximate Site Boundary)



320 Flint Street  
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**CROSS SECTION LOCATIONS**

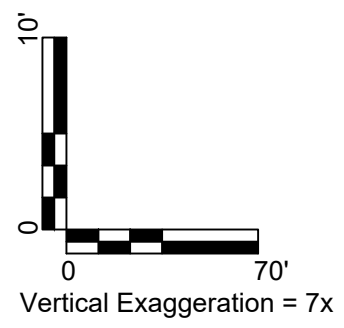
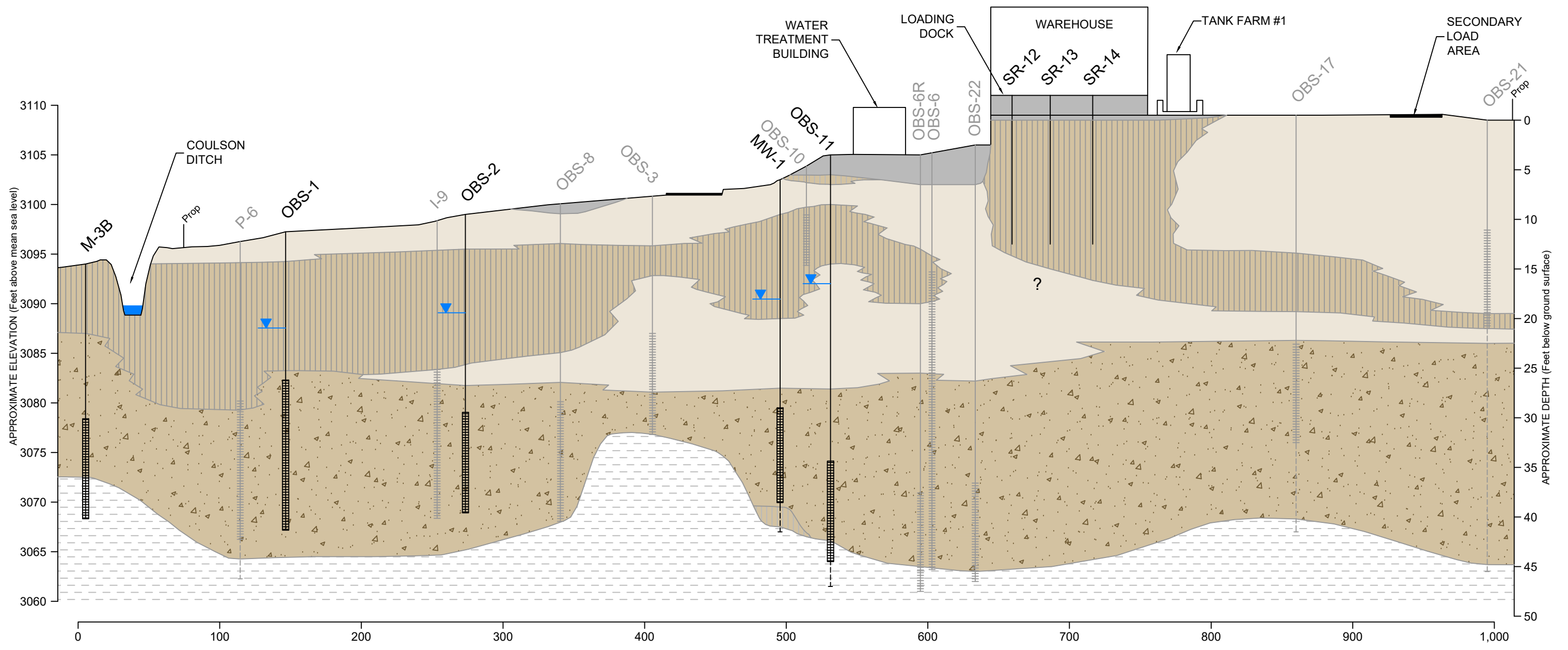
LPI BILLINGS  
1525 LOCKWOOD ROAD  
BILLINGS, MONTANA

DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: TLL
DATE: 5/23/2025	ACAD FILE: <small>20250223_RBI_Billings_MT_Fig 3-X-Section Locations.dwg</small>	
PROJECT NO.: 03005-2025	PLOT SCALE: APPROX. 1" = 150'	

**FIGURE 3**

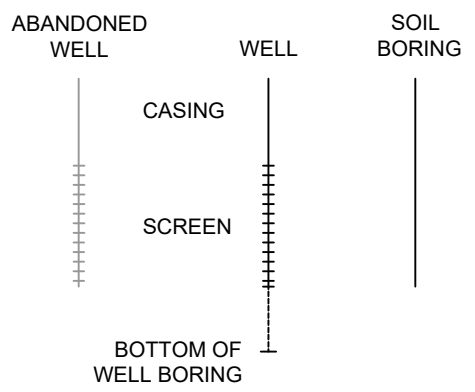
**A**  
NORTH

**A'**  
SOUTH



▼ Approximate Static Groundwater Elevation (May 2025)

Prop. Approximate Site Property Boundary



- FILL
- CLAY / CLAYEY SAND
- SILT / SILTY SAND
- SANDY GRAVEL
- SHALE BEDROCK

? = Unknown or assumed extent  
 \*Lithology from this well not used in interpretation.



320 Flint Street  
 Reno, Nevada 89501  
 (775) 622-0857

**GEOLOGIC CROSS SECTION A-A'**

LPI Billings  
 1525 Lockwood Road  
 Billings, Montana

DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: TLL
DATE: 9/12/2025	ACAD FILE: 20250912 RUBK Billings-MT Fig 4.3-A-Geo-A-A'.dwg	
PROJECT NO.: 03005-2025	HORIZONTAL PLOT SCALE: APPROX. 1" = 70'	

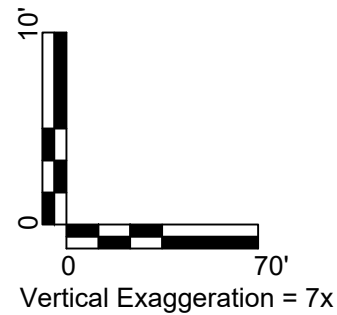
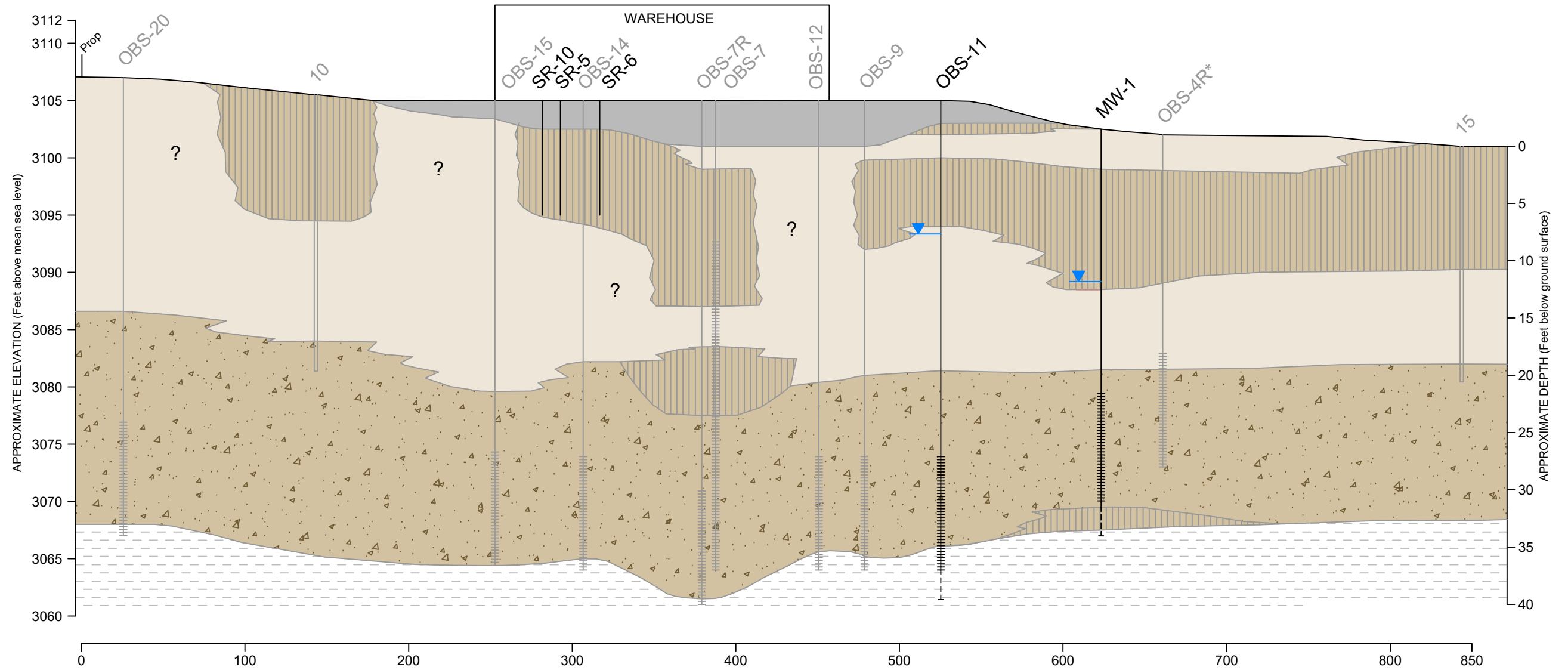
**FIGURE 4**

# B

WEST

# B'

EAST



Approximate Static Groundwater Elevation (November 2024)

Approximate Site Property Boundary

ABANDONED OPEN HOLE WELL

ABANDONED WELL

CASING

SCREEN

WELL

SOIL BORING

FILL

CLAY / CLAYEY SAND

SILT / SILTY SAND

SANDY GRAVEL

SHALE BEDROCK

? = Unknown or assumed extent

\*Lithology from this well not used in interpretation.



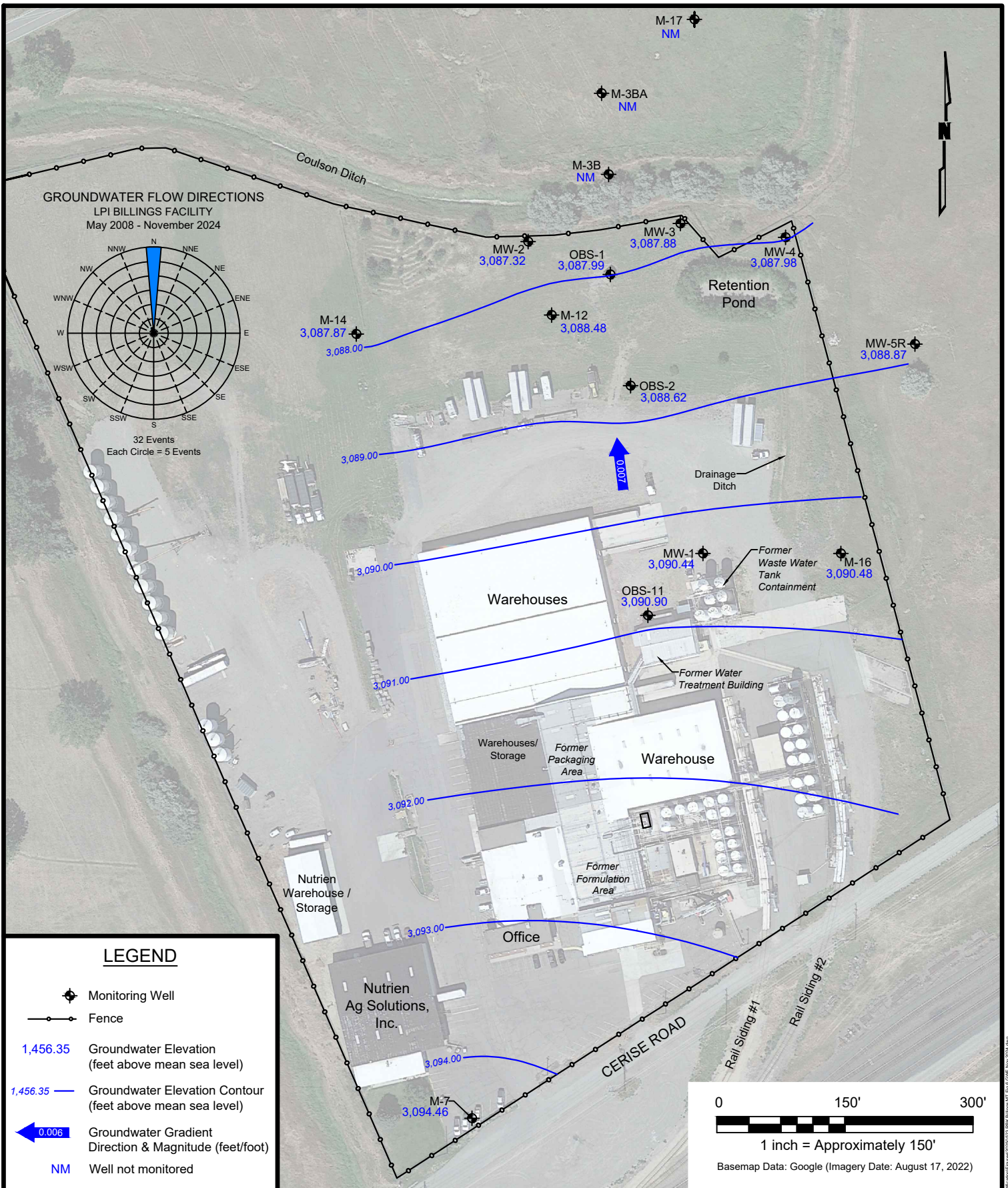
320 Flint Street  
Reno, Nevada 89501  
(775) 622-0857

### GEOLOGIC CROSS SECTION B-B'

LPI Billings  
1525 Lockwood Road  
Billings, Montana

DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: TLL
DATE: 5/23/2025	ACAD FILE: 030005-2025-05-23-08-AM.dwg	
PROJECT NO.: 030005-2025	HORIZONTAL PLOT SCALE: APPROX. 1" = 70'	

## FIGURE 5



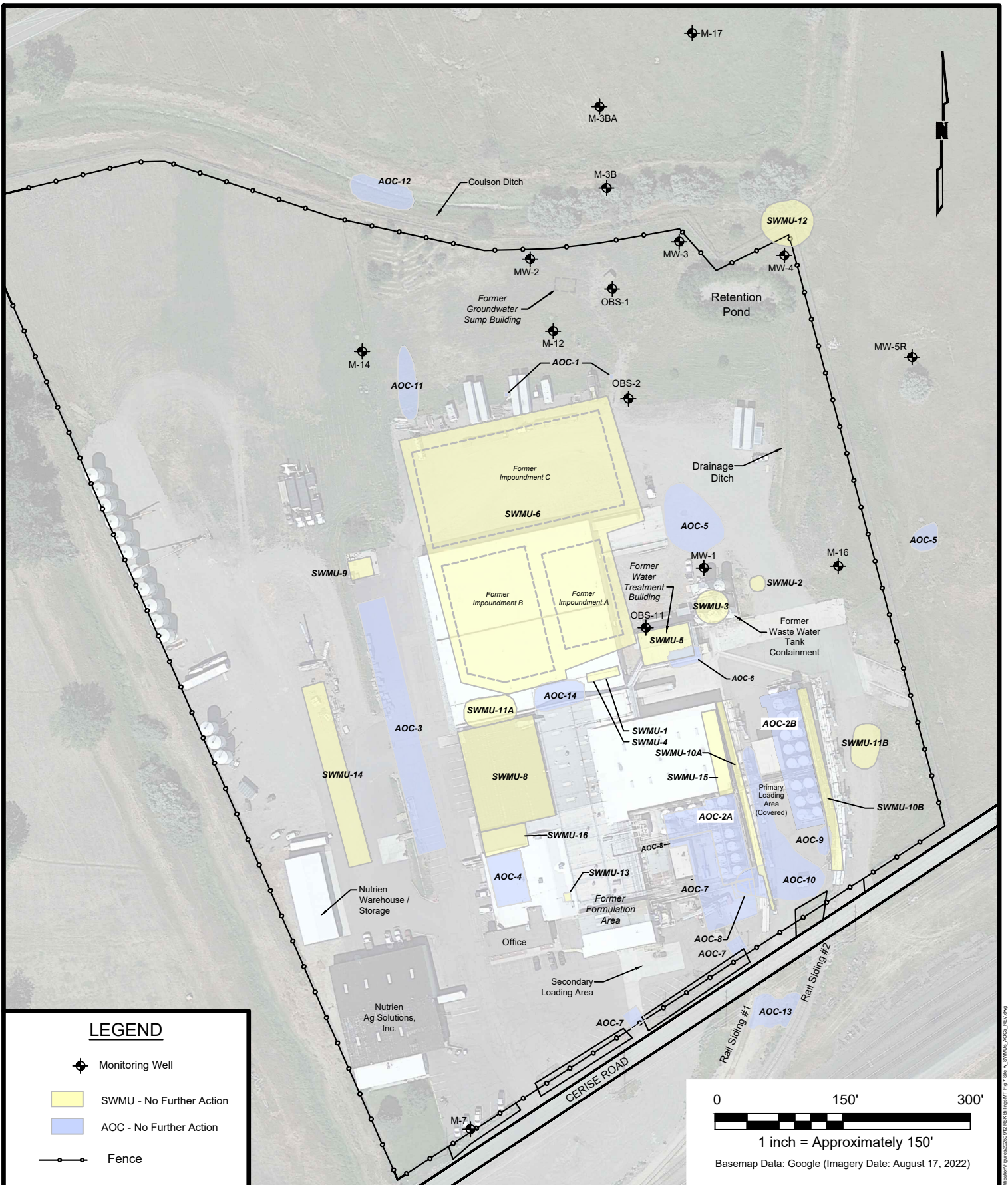
320 Flint Street  
Reno, Nevada 89501  
(775) 622-0857

## GROUNDWATER ELEVATIONS AND CONTOURS NOVEMBER 2024

LPI BILLINGS  
1525 LOCKWOOD ROAD  
BILLINGS, MONTANA

DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: TLL
DATE: 5/23/2025	ACAD FILE: 20250223 RBL Billings MT Fig 6 GWR Nov 2024.dwg	
PROJECT NO.: 03005-2025	PLOT SCALE: APPROX. 1" = 150'	

**FIGURE 6**



**LEGEND**

- Monitoring Well
- SWMU - No Further Action
- AOC - No Further Action
- Fence



1 inch = Approximately 150'

Basemap Data: Google (Imagery Date: August 17, 2022)



320 Flint Street  
Reno, Nevada 89501  
(775) 622-0857

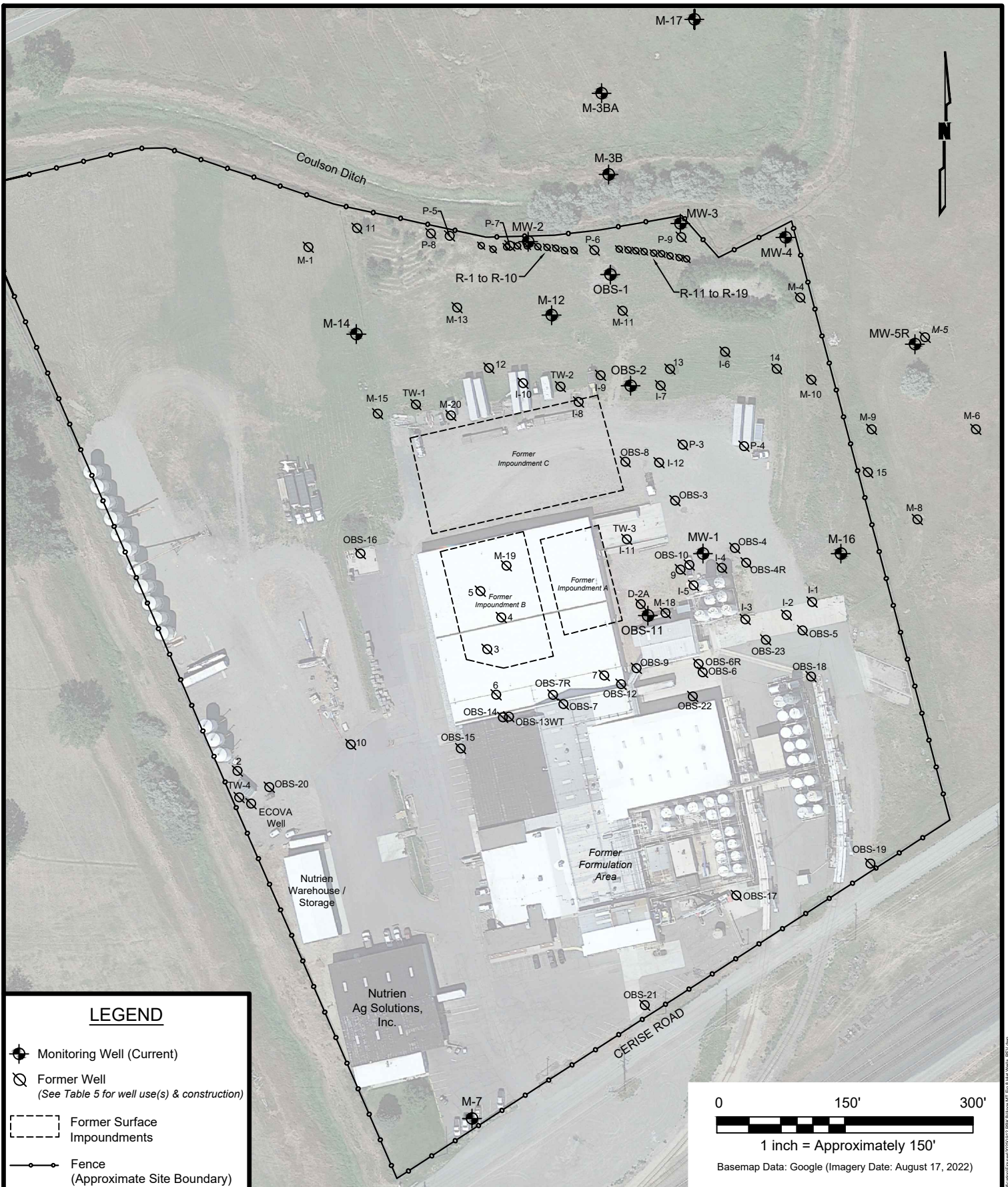
**HISTORICAL AOCs AND SWMUs**

**LPI Billings**  
1525 Lockwood Road  
Billings, Montana

DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: TLL
DATE: 9/12/2025	ACAD FILE: 20250912 09K_Billings MT Fig 7 Site w_ SWMU_AOCs_REV.dwg	
PROJECT NO.: 03005-2025	PLOT SCALE: APPROX. 1" = 150'	

**FIGURE 7**

C:\Users\spf\OneDrive\Documents\Projects\03005-2025\03005-2025-09K\_Billings MT Fig 7 Site w\_ SWMU\_AOCs\_REV.dwg



**LEGEND**

- Monitoring Well (Current)
- Former Well  
(See Table 5 for well use(s) & construction)
- Former Surface Impoundments
- Fence  
(Approximate Site Boundary)

0 150' 300'



1 inch = Approximately 150'

Basemap Data: Google (Imagery Date: August 17, 2022)



320 Flint Street  
Reno, Nevada 89501  
(775) 622-0857

**CURRENT AND HISTORICAL  
WELL LOCATIONS**

LPI BILLINGS  
1525 LOCKWOOD ROAD  
BILLINGS, MONTANA

DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: SPF
DATE: 9/30/2025	ACAD FILE: 20250912 RBL_Billings MT Fig 8 Inter Well_SPF.dwg	
PROJECT NO.: 03005-2025	PLOT SCALE: APPROX. 1" = 150'	

**FIGURE 8**

**TABLES**

**GROUNDWATER CMI CERTIFICATION REPORT**

LPI Billings Facility  
Billings, Montana

November 2025

**TABLE 1**  
**CURRENT MONITORING WELL CONSTRUCTION DETAILS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Installation Date	Well Diameter (inches)	Top of Casing Elevation (ft amsl)	Ground Surface Elevation (ft amsl)	Borehole Depth (ft bgs)	Well Depth (ft bgs)	Screen Interval (ft bgs)	
							Top	Bottom
MW-1	02/29/16	2	3,107.00	3,103.75	35.5	33	22.5	32.5
MW-2	03/02/16	2	3,102.90	3,099.86	35.5	35	24.5	34.5
MW-3	03/03/16	2	3,101.60	3,098.31	36.5	31.5	21	31
MW-4	03/01/16	2	3,100.97	3,098.00	33.0	31.5	21	31
MW-5R	08/03/20	2	3,102.84	3,099.74	34.0	34	19	33.5
<i>M-5</i>	--	4	<i>3,099.97</i>	<i>3,099.62</i>	--	29	--	--
M-7	--	4	3,112.02	3,112.46	--	34	--	--
M-12	1983	4	3,099.22	3,098.98	--	31.5	--	--
M-14	1983	4	3,101.56	3,100.05	--	31.5	--	--
M-16	1983	4	3,104.51	3,103.48	--	34.7	--	--
OBS-1	02/02/88	2	3,098.90	3,099.65	--	30	15	30
OBS-2	02/02/88	2	3,102.69	3,100.32	--	30	20	30
OBS-11	05/05/95	2	3,107.38	3,105.08	--	43.5	31	41
<b>Offsite Contingency Wells</b>								
M-17	--	4	3092.07	3,089.72	--	21.2	--	--
M-3B	08/20/85	4	3,097.94	3,096.55	--	25.6	12.1	22.1
M-3BA	--	4	3,092.40	3,090.52	--	26	12	26

**Notes:**

ft amsl = Feet above mean sea level

ft bgs = Feet below the ground surface

-- = Information not available

*M-5* = Well destroyed August 2020 and replaced with MW-5R due to accumulated silt and age.

Construction details for wells installed prior to 2016 were taken from well logs (where available), historical report tables, cross sections, and/or gauging information.

Wells surveyed 3/17/2016 by a Montana Licensed PLS. NAD83 (2011) used for Latitude and Longitude; NAVD88 used for elevations.

MW-1 and OBS-2 re-surveyed on 6/27/2019 following well head repairs. Well MW-5R surveyed 8/11/2020.

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
MW-1 (3,102.01)	05/03/16	12.34	9.09	3,089.67
	11/09/16	11.20	7.95	3,090.81
(3,107.00) <sup>1</sup>	05/16/17	10.80	7.55	3,091.21
	11/06/17	11.62	8.37	3,090.39
	05/21/18	10.76	7.51	3,091.25
	11/05/18	13.11	9.86	3,088.90
	05/17/19	16.60	13.35	3,090.40
	11/14/19	15.03	11.78	3,091.97
	08/07/20	15.77	12.52	3,091.23
	11/12/20	16.52	13.27	3,090.48
	05/06/21	17.03	13.78	3,089.97
	11/23/21	16.47	13.22	3,090.53
	05/04/22	16.49	13.24	3,090.51
	11/04/22	16.78	13.53	3,090.22
	05/03/23	17.38	14.13	3,089.62
	11/15/23	16.16	12.91	3,090.84
	05/30/24	16.02	12.77	3,090.98
	11/26/24	16.56	13.31	3,090.44
MW-2 (3,102.90)	05/03/16	16.18	13.14	3,086.72
	11/09/16	15.40	12.36	3,087.50
	05/16/17	14.80	11.76	3,088.10
	11/06/17	15.53	12.49	3,087.37
	05/21/18	13.82	10.78	3,089.08
	11/06/18	17.09	14.05	3,085.81
	05/15/19	15.52	12.48	3,087.38
	11/15/19	14.36	11.32	3,088.54
	08/06/20	14.63	11.59	3,088.27
	11/11/20	15.58	12.54	3,087.32
	05/05/21	15.82	12.78	3,087.08
	11/22/21	15.57	12.53	3,087.33
	05/03/22	15.22	12.18	3,087.68
	11/03/22	15.87	12.83	3,087.03
	05/03/23	16.04	13.00	3,086.86
	11/14/23	15.24	12.20	3,087.66

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
MW-2 (cont.)	05/29/24	14.57	11.53	3,088.33
	11/25/24	15.58	12.54	3,087.32
MW-3 (3,101.60)	05/03/16	14.16	10.87	3,087.44
	11/09/16	13.36	10.07	3,088.24
	12/08/16	13.60	10.31	3,088.00
	05/16/17	12.65	9.36	3,088.95
	11/06/17	13.76	10.47	3,087.84
	05/21/18	12.03	8.74	3,089.57
	11/05/18	15.42	12.13	3,086.18
	05/15/19	13.60	10.31	3,088.00
	11/14/19	12.33	9.04	3,089.27
	08/06/20	12.71	9.42	3,088.89
	11/11/20	13.52	10.23	3,088.08
	05/05/21	13.89	10.60	3,087.71
	11/22/21	13.69	10.40	3,087.91
	05/03/22	13.34	10.05	3,088.26
	11/03/22	13.92	10.63	3,087.68
	05/03/23	14.31	11.02	3,087.29
11/14/23	13.49	10.20	3,088.11	
05/29/24	12.58	9.29	3,089.02	
11/25/24	13.72	10.43	3,087.88	
MW-4 (3,100.97)	05/03/16	13.50	10.53	3,087.47
	11/09/16	12.70	9.73	3,088.27
	05/16/17	12.30	9.33	3,088.67
	11/06/17	13.22	10.25	3,087.75
	05/21/18	11.48	8.51	3,089.49
	11/05/18	15.00	12.03	3,085.97
	05/15/19	12.97	10.00	3,088.00
	11/14/19	11.69	8.72	3,089.28
	08/06/20	11.95	8.98	3,089.02
	11/11/20	12.96	9.99	3,088.01
	05/05/21	13.25	10.28	3,087.72
	11/22/21	12.97	10.00	3,088.00
	05/03/22	12.62	9.65	3,088.35

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
MW-4 (cont.)	11/03/22	13.24	10.27	3,087.73
	05/03/23	13.51	10.54	3,087.46
	11/14/23	12.71	9.74	3,088.26
	05/29/24	11.88	8.91	3,089.09
	11/25/24	12.99	10.02	3,087.98
M-5 (3,099.97)	05/03/16	11.90	11.55	3,088.07
	11/09/16	11.00	10.65	3,088.97
	05/16/17	10.45	10.10	3,089.52
	11/06/17	11.97	11.62	3,088.00
	05/21/18	10.49	10.14	3,089.48
	11/06/18	13.71	13.36	3,086.26
	05/15/19	11.43	11.08	3,088.54
11/14/19	10.06	9.71	3,089.91	
<i>Destroyed August 2020 - Replaced With MW-5R</i>				
MW-5R (3,102.84) <sup>2</sup>	08/07/20	13.37	10.27	3,089.47
	11/12/20	14.06	10.96	3,088.78
	05/06/21	14.40	11.30	3,088.44
	11/23/21	14.04	10.94	3,088.80
	05/04/22	13.77	10.67	3,089.07
	11/03/22	14.34	11.24	3,088.50
	05/02/23	14.65	11.55	3,088.19
	11/14/23	13.76	10.66	3,089.08
	05/30/24	13.32	10.22	3,089.52
11/26/24	13.97	10.87	3,088.87	
M-7 (3,112.02)	05/30/07	17.60	18.04	3,094.42
	11/12/07	18.62	19.06	3,093.40
	05/29/08	19.14	19.58	3,092.88
	08/19/08	17.14	17.58	3,094.88
	11/11/08	17.68	18.12	3,094.34
	05/25/10	19.80	20.24	3,092.22
	11/16/10	9.50	9.94	3,102.52
	05/25/11	14.04	14.48	3,097.98
	11/15/11	17.90	18.34	3,094.12
05/24/12	18.32	18.76	3,093.70	

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
M-7 (cont.)	11/14/12	18.70	19.14	3,093.32
	05/22/13	19.46	19.90	3,092.56
	11/19/13	17.70	18.14	3,094.32
	07/17/14	16.54	16.98	3,095.48
	11/11/14	17.62	18.06	3,094.40
	05/20/15	18.80	19.24	3,093.22
	11/10/15	17.40	17.84	3,094.62
	05/03/16	18.80	19.24	3,093.22
	11/09/16	11.20	11.64	3,100.82
	05/16/17	17.40	17.84	3,094.62
	11/06/17	17.02	17.46	3,095.00
	05/21/18	17.30	17.74	3,094.72
	11/06/18	18.39	18.83	3,093.63
	05/17/19	18.17	18.61	3,093.85
	11/15/19	15.94	16.38	3,096.08
	08/07/20	17.01	17.45	3,095.01
	11/12/20	17.59	18.03	3,094.43
	05/06/21	18.56	19.00	3,093.46
	11/22/21	17.50	17.94	3,094.52
	05/03/22	18.16	18.60	3,093.86
11/03/22	18.06	18.50	3,093.96	
05/03/23	18.93	19.37	3,093.09	
11/14/23	17.23	17.67	3,094.79	
05/29/24	17.89	18.33	3,094.13	
11/26/24	17.56	18.00	3,094.46	
M-12 (3,099.22)	05/30/07	9.80	9.56	3,089.42
	11/12/07	11.60	11.36	3,087.62
	05/29/08	10.42	10.18	3,088.80
	08/19/08	10.73	10.49	3,085.98
	11/11/08	10.80	10.56	3,088.42
	05/25/10	10.78	10.54	3,088.44
	11/16/10	11.92	11.68	3,087.30
	05/25/11	7.50	7.26	3,091.72
11/16/11	11.10	10.86	3,088.12	

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
M-12 (cont.)	05/24/12	11.00	10.76	3,088.22
	11/14/12	11.70	11.46	3,087.52
	05/22/13	11.60	11.36	3,087.62
	11/19/13	10.74	10.50	3,088.48
	05/08/14	10.41	10.17	3,088.81
	06/12/14	9.14	8.90	3,090.08
	07/17/14	9.04	8.80	3,090.18
	11/11/14	10.90	10.66	3,088.32
	05/20/15	11.16	10.92	3,088.06
	11/10/15	10.82	10.58	3,088.40
	05/03/16	11.36	11.12	3,087.86
	11/09/16	10.50	10.26	3,088.72
	05/16/17	10.00	9.76	3,089.22
	11/06/17	10.72	10.48	3,088.50
	05/21/18	9.22	8.98	3,090.00
	11/06/18	12.21	11.97	3,087.01
	05/17/19	10.63	10.39	3,088.59
	11/15/19	9.39	9.15	3,089.83
	08/07/20	9.88	9.64	3,089.34
	11/11/20	10.73	10.49	3,088.49
	05/06/21	11.03	10.79	3,088.19
	11/23/21	10.76	10.52	3,088.46
	05/03/22	10.45	10.21	3,088.77
	11/03/22	11.04	10.80	3,088.18
05/03/23	11.33	11.09	3,087.89	
11/14/23	10.40	10.16	3,088.82	
05/30/24	9.80	9.56	3,089.42	
11/25/24	10.74	10.50	3,088.48	
M-14 (3,101.56)	05/03/16	14.20	12.69	3,087.36
	11/09/16	13.46	11.95	3,088.10
	05/16/17	12.50	10.99	3,089.06
	11/06/17	13.57	12.06	3,087.99
	05/21/18	12.04	10.53	3,089.52
	11/06/18	14.89	13.38	3,086.67

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
M-14 (cont.)	05/17/19	13.49	11.98	3,088.07
	11/15/19	12.42	10.91	3,089.14
	08/06/20	12.80	11.29	3,088.76
	11/11/20	13.74	12.23	3,087.82
	05/05/21	14.04	12.53	3,087.52
	11/22/21	13.77	12.26	3,087.79
	05/03/22	12.43	10.92	3,089.13
	11/03/22	14.01	12.50	3,087.55
	05/02/23	14.30	12.79	3,087.26
	11/14/23	13.40	11.89	3,088.16
	05/29/24	12.74	11.23	3,088.82
	11/25/24	13.69	12.18	3,087.87
M-16 (3,104.51)	05/31/07	13.52	12.49	3,090.99
	11/13/07	14.92	13.89	3,089.59
	05/28/08	14.40	13.37	3,090.11
	06/25/08	13.94	12.91	3,090.57
	11/11/08	14.18	13.15	3,090.33
	05/25/10	14.70	13.67	3,089.81
	11/16/10	15.38	14.35	3,089.13
	05/25/11	11.82	10.79	3,092.69
	11/16/11	14.20	13.17	3,090.31
	05/24/12	14.50	13.47	3,090.01
	11/14/12	15.08	14.05	3,089.43
	05/22/13	15.38	14.35	3,089.13
	11/19/13	14.12	13.09	3,090.39
	05/08/14	13.95	12.92	3,090.56
	06/12/14	12.65	11.62	3,091.86
	07/17/14	12.54	11.51	3,091.97
	11/11/14	14.10	13.07	3,090.41
	05/20/15	14.64	13.61	3,089.87
	11/10/15	14.00	12.97	3,090.51
	05/03/16	14.80	13.77	3,089.71
11/09/16	13.70	12.67	3,090.81	
05/16/17	13.30	12.27	3,091.21	

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
M-16 (cont.)	11/06/17	14.37	13.34	3,090.14
	05/21/18	13.50	12.47	3,091.01
	11/05/18	15.94	14.91	3,088.57
	05/15/19	14.31	13.28	3,090.20
	11/14/19	12.64	11.61	3,091.87
	08/07/20	13.33	12.30	3,091.18
	11/12/20	14.09	13.06	3,090.42
	05/06/21	14.58	13.55	3,089.93
	11/23/21	14.06	13.03	3,090.45
	05/04/22	14.03	13.00	3,090.48
	11/03/22	14.32	13.29	3,090.19
	05/02/23	14.89	13.86	3,089.62
	11/14/23	13.69	12.66	3,090.82
	05/30/24	13.49	12.46	3,091.02
	11/26/24	14.03	13.00	3,090.48
OBS-1 (3,098.90)	05/20/15	11.30	12.05	3,087.60
	11/10/15	10.96	11.71	3,087.94
	05/03/16	11.46	12.21	3,087.44
	11/09/16	10.60	11.35	3,088.30
	12/08/16	10.90	11.65	3,088.00
	05/16/17	10.20	10.95	3,088.70
	11/06/17	10.96	11.71	3,087.94
	05/21/18	9.28	10.03	3,089.62
	11/06/18	12.54	13.29	3,086.36
	05/15/19	10.87	11.62	3,088.03
	11/14/19	9.60	10.35	3,089.30
	08/07/20	10.09	10.84	3,088.81
	11/11/20	10.89	11.64	3,088.01
	05/06/21	11.16	11.91	3,087.74
	11/23/21	10.90	11.65	3,088.00
	05/03/22	10.56	11.31	3,088.34
	11/03/22	11.17	11.92	3,087.73
05/02/23	11.43	12.18	3,087.47	

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)	
OBS-1 (cont.)	11/14/23	10.57	11.32	3,088.33	
	05/30/24	9.85	10.60	3,089.05	
	11/26/24	10.91	11.66	3,087.99	
OBS-2 (3,100.96)	05/30/07	11.46	9.09	3,089.50	
	11/12/07	13.24	10.87	3,087.72	
	05/29/08	12.12	9.75	3,088.84	
	08/19/08	12.48	10.11	3,088.48	
	11/11/08	12.44	10.07	3,088.52	
	05/25/10	12.66	10.29	3,088.30	
	11/16/10	13.90	11.53	3,087.06	
	05/25/11	9.13	6.76	3,091.83	
	11/16/11	12.92	10.55	3,088.04	
	05/24/12	12.92	10.55	3,088.04	
	11/14/12	13.38	11.01	3,087.58	
	05/22/13	13.26	10.89	3,087.70	
	11/19/13	12.43	10.06	3,088.53	
	05/08/14	12.11	9.74	3,088.85	
	06/12/14	10.83	8.46	3,090.13	
	07/17/14	10.60	8.23	3,090.36	
	08/13/14	11.65	9.28	3,089.31	
	11/11/14	12.65	10.28	3,088.31	
	05/20/15	12.80	10.43	3,088.16	
	11/10/15	12.44	10.07	3,088.52	
	05/03/16	13.00	10.63	3,087.96	
	11/09/16	12.12	9.75	3,088.84	
	12/08/16	12.38	10.01	3,088.58	
	05/16/17	11.50	9.13	3,089.46	
	11/06/17	12.42	10.05	3,088.54	
	05/21/18	10.95	8.58	3,090.01	
	11/06/18	13.96	11.59	3,087.00	
	(3,102.69) <sup>1</sup>	05/15/19	14.08	11.71	3,088.61
		11/15/19	12.72	10.35	3,089.97
08/07/20		13.32	10.95	3,089.37	
	11/12/20	14.06	11.69	3,088.63	

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
OBS-2 (cont.)	05/06/21	14.38	12.01	3,088.31
	11/23/21	14.16	11.79	3,088.53
	05/04/22	13.83	11.46	3,088.86
	11/04/22	14.37	12.00	3,088.32
	05/02/23	14.75	12.38	3,087.94
	11/14/23	13.72	11.35	3,088.97
	05/30/24	13.21	10.84	3,089.48
	11/26/24	14.07	11.70	3,088.62
OBS-11 (3,107.38)	05/30/07	15.80	13.50	3,091.58
	11/12/07	17.30	15.00	3,090.08
	05/29/08	16.84	14.54	3,090.54
	06/25/08	16.32	14.02	3,091.06
	07/22/08	15.90	13.60	3,091.48
	08/19/08	16.20	13.90	3,091.18
	09/17/08	15.80	13.50	3,091.58
	10/14/08	16.00	13.70	3,091.38
	11/11/08	16.42	14.12	3,090.96
	05/25/10	17.00	14.70	3,090.38
	11/16/10	17.90	15.60	3,089.48
	05/25/11	14.90	12.60	3,092.48
	11/16/11	16.70	14.40	3,090.68
	05/24/12	16.94	14.64	3,090.44
	11/14/12	17.44	15.14	3,089.94
	05/22/13	17.80	15.50	3,089.58
	11/19/13	16.43	14.13	3,090.95
	07/17/14	15.00	12.70	3,092.38
	11/11/14	16.40	14.10	3,090.98
	05/20/15	17.26	14.96	3,090.12
11/10/15	16.32	14.02	3,091.06	
05/03/16	17.24	14.94	3,090.14	
11/09/16	16.02	13.72	3,091.36	
05/16/17	15.50	13.20	3,091.88	
11/06/17	16.31	14.01	3,091.07	

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
OBS-11 (cont.)	05/21/18	15.62	13.32	3,091.76
	11/05/18	17.70	15.40	3,089.68
	05/17/19	16.61	14.31	3,090.77
	11/15/19	14.87	12.57	3,092.51
	08/07/20	15.67	13.37	3,091.71
	11/12/20	16.41	14.11	3,090.97
	05/06/21	17.00	14.70	3,090.38
	11/23/21	16.35	14.05	3,091.03
	05/04/22	16.50	14.20	3,090.88
	11/04/22	16.69	14.39	3,090.69
	05/03/23	17.35	15.05	3,090.03
	11/14/23	16.01	13.71	3,091.37
	05/30/24	16.04	13.74	3,091.34
	11/26/24	16.48	14.18	3,090.90
Offsite Wells: ExxonMobil Property <sup>3</sup>				
M-17 (3,092.07)	11/3/2022	6.44	4.09	3,079.19
	11/14/2023	5.92	3.57	3,079.71
M-3B (3097.94)	11/4/2022	10.52	9.13	3,076.90
	11/14/2023	9.93	8.54	3077.49
M-3BA (3,092.40)	05/29/08	5.00	3.12	3,087.40
	08/19/08	6.20	4.32	3,086.20
	11/16/11	6.02	4.14	3,086.38
	05/24/12	5.80	3.92	3,086.60
	11/14/12	6.67	4.79	3,085.73
	05/22/13	6.20	4.32	3,086.20
	11/19/13	5.74	3.86	3,086.66
	05/08/14	5.32	3.44	3,087.08
	06/12/14	3.92	2.04	3,088.48
07/17/14	4.13	2.25	3,088.27	

**TABLE 2**  
**HISTORICAL GROUNDWATER ELEVATION DATA**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID (toc elev.)	Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft amsl)
M-3BA	11/11/14	5.92	4.04	3,086.48
(cont.)	11/04/22	6.01	4.13	3,086.39
	11/14/23	5.57	3.69	3,086.83

Notes:

toc elev. = Top of casing elevation. All wells surveyed March 2016.

Historical groundwater elevations normalized to reflect 2016 survey.

ft btoc = Feet below top of casing.

ft bgs = Feet below the ground surface.

ft amsl = Feet above mean sea level.

-- = Not measured or no data available.

<sup>1</sup> = MW-1 and OBS-2 well casings were repaired then re-surveyed on 6/25/2019.

<sup>2</sup> = MW-5R surveyed 8/11/2020

<sup>3</sup> = Routine M&S of offsite wells not required per 2017 GWCMC WP

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
M-7	02/10/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	08/10/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	<5.0	--
	11/15/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	02/02/94	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/10/94	--	--	--	--	--	--	--	--	--	--	--	<0.01
	02/08/95	--	--	--	--	--	--	--	--	--	--	--	<0.01
	08/16/95	--	--	--	--	--	--	--	--	--	--	--	<0.03
	11/08/95	--	--	--	--	--	--	--	--	--	--	--	<0.01
	12/19/95	2.36	--	--	4.2	<5.2	--	<363	<455	<10	<10	--	--
	11/05/97	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/06/98	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/04/98	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/04/99	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/17/99	--	--	--	--	--	--	--	--	--	--	--	<0.01
	06/12/00	<1.0	--	--	<0.25	<1.0	<0.5	<200	<200	--	--	--	--
	11/17/00	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/30/01	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/02/01	--	--	--	--	--	--	--	--	--	--	--	<0.01
	01/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/10/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/29/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	06/23/04	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/18/04	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/26/05	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/17/05	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/22/06	--	--	--	--	--	--	--	--	--	--	--	<0.01
	12/04/06	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/30/07	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	<0.01
	11/12/07	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	<0.01
	03/18/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	05/29/08	--	--	--	--	--	--	3.3	<2.0	<1.0	--	<5.0	<0.01
	08/19/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	11/11/08	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/27/09	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/17/09	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/25/10	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/16/10	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/25/11	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/15/11	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
DEQ-7 Standard		70	1,000	70	200	300	500	4.0	300	5.5*	4.6	10	0.3
EPA RSL										0.52**			
M-7 (cont.)	05/24/12	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/14/12	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/22/13	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/19/13	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	07/17/14	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/11/14	--	--	--	--	--	--	--	--	--	--	0.46	<0.010
	05/20/15	--	--	--	--	--	--	--	--	--	--	0.77 J	<0.010
	11/10/15	--	--	--	--	--	--	--	--	--	--	0.56 J	<0.010
M-10	04/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/29/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	11/17/05	<1.0	6.8	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/22/06	<1.0	<10	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	11/29/06	<1.0	14	0.13	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/31/07	<1.0	21	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.1	<11	<5.0	<0.01
	11/13/07	<1.0	43	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/28/08	<1.0	38	<1.0	<0.5	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	11/11/08	<1.0	28	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	<1.0	34	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/17/09	<1.0	33	<1.0	<0.4	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/25/10	<1.0	25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/16/10	<1.0	32	<1.0	<0.4	<1.0	<0.5	<2.0	1.6	<1.0	<5.0	<5.0	<0.01
	05/25/11	<1.0	21	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/16/11	<1.0	18	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/24/12	<1.0	11	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	0.01
	11/14/12	<1.0	6.6	<1.0	1.2	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/22/13	1.9	5.4	<1.0	1.8	<1.0	<0.5	<2.0	<2.0	<0.4	<5.0	<5.0	<0.01
	11/19/13	<1.0	3.1	--	39	--	<0.50	<2.0	<300 d	<0.40	<5.0	1.0	<0.01
07/17/14	<1.0	2.9	--	1.7	--	<0.50	<2.0	<200	<0.40	<5.0	<5.0	<0.01	
11/11/14	<0.20	2.7	--	58	--	<0.20	<0.20	0.53	0.38	<0.25	2.3	<0.010	
05/20/15	<0.20	11	--	54 d	--	<0.20	<0.20	0.50	<0.25	<0.25	1.3	<0.010	
11/10/15	0.12	7.7	--	42 d	--	1.5	<0.10	1.1	<0.25	<0.25	1.3	<0.010	
M-11	08/13/14 C	--	--	--	--	--	--	<2.0	--	--	--	--	--
M-12	02/11/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	0.17
	08/10/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	<10	<10	<5.0	0.03
	11/16/93	7.0	--	--	0.54	5.5	<0.5	<250	<250	--	--	--	--
	02/03/94	<1.0	--	--	<0.25	1.1	<0.5	<250	<250	--	--	--	0.11
	05/11/94	<1.0	--	--	<0.25	2.2	<0.5	<250	<250	--	--	--	0.09
	08/31/94	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	--	6.0	0.04
	11/01/94	<1.0	--	0.42	<0.25	38	<0.5	<200	47	--	--	--	--
02/09/95	1.6	--	0.4	0.66	0.18	<0.5	<200	93	--	--	--	<0.01	

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
M-12 (cont.)	02/14/95	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/95	3.3	--	0.33	0.46	<1.0	<0.5	<200	<200	--	--	--	0.04
	11/08/95	0.63	--	0.4	0.044	<1.0	<0.5	<200	150	--	--	<5.0	0.02
	12/20/95	<2.0	--	--	<0.72	<5.2	--	<363	<455	<13	<13	--	--
	05/29/96	0.25	--	0.33	<0.25	<1.0	<0.5	<200	71	--	--	--	--
	11/12/96	0.018	--	0.19	0.062	<1.0	<0.5	<200	<200	--	--	--	--
	05/13/97	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	--	--	<0.01
	11/05/97	1.4	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	--	--	<0.01
	05/06/98	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	11/04/98	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	9.0	<0.01
	05/04/99	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	0.03
	11/17/99	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	<5.0	0.02
	06/08/00	<1.0	--	--	<0.25	<1.0	<0.5	<200	<200	--	--	--	--
	11/16/00	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	7.0	<0.01
	05/30/01	--	--	--	--	--	--	--	--	<10	<10	--	<0.01
	11/02/01	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	<5.0	<0.01
	01/07/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/28/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	11/13/03	--	--	--	--	--	--	--	--	--	--	<5.0	--
	06/23/04	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/18/04	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/26/05	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/17/05	<1.0	0.45	<1.0	<0.25	<1.0	<0.5	<2.0	38	<1.0	<10	<5.0	<0.01
	05/22/06	<1.0	1.8	<1.0	<0.25	1.3	<0.5	<2.0	7.8	<1.0	<10	<b>36</b>	<0.01
	07/19/06	--	--	--	--	--	--	--	8.7	--	--	--	--
	12/04/06	<1.0	1.8	0.16	<0.25	<1.0	<0.5	<2.0	11	<1.0	<10	<5.0	<0.01
	05/30/07	0.2	1.6	<1.0	0.095	<1.0	<0.5	<2.0	<2.0	<1.1	<11	<b>11</b>	<0.01
	11/12/07	<1.0	1.4	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	03/18/08	--	--	--	--	--	--	<2.0	2.2	<1.0	--	7.0	--
	05/29/08	<1.0	3.7	<1.0	<0.25	<1.0	<0.5	<2.0	6.9	<1.0	<10	<b>15</b>	<0.01
	08/19/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	11/11/08	<1.0	0.27	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	<1.0	1.3	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/17/09	<1.0	0.55	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<b>11</b>	<0.01
	05/25/10	<1.0	0.57	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<b>11</b>	<0.01
	11/16/10	<1.0	0.72	<1.0	0.27	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<b>15</b>	<0.01
	05/25/11	<1.0	4.0	<1.0	0.29	<1.0	<0.5	<2.0	61	<1.0	<5.0	<5.0	<0.01
	11/16/11	<1.0	<1.0	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<b>15</b>	<0.01
	05/24/12	<1.0	4.1	<1.0	<0.25	<1.0	0.48	<2.0	21	<1.0	<5.0	7.0	0.02

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**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
M-12 (cont.)	11/14/12	<1.0	3.6	<1.0	0.36	<1.0	<0.5	<2.0	<2.0	0.16	<10	<b>12</b>	<0.01
	05/22/13	<1.0	3.4	<1.0	<0.25	<1.0	<0.50	1.0 J	4.5	0.17 J	<5.0	<b>13</b>	<0.01
	11/19/13	<1.0	1.4	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	3.3 J	<0.01
	07/17/14	<1.0	3.8	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	7	<0.01
	11/11/14	<0.20	0.98	--	<0.20	--	<0.20	<0.20	64	0.38	<0.25	2.3	<0.010
	05/20/15	<0.20	10	--	<0.20	--	6.0	<0.20	210 d	<0.25	<0.25	6.2	<0.010
	11/10/15	0.11	3.9	--	0.34	--	8.6	<0.10	110 d	<0.25	<0.25	5.1	<0.010
M-15	02/10/93	<1.0	--	--	0.96	<1.0	<0.5	<250	<250	--	--	--	<0.01
	08/10/93	<1.0	--	--	0.5	1.5	<0.5	<250	<250	<10	<10	<5.0	<0.01
	11/15/93	5.7	--	--	0.84	<1.0	0.6	<250	<250	--	--	--	--
	02/02/94	<1.0	--	--	0.48	<1.0	<0.5	<250	<250	--	--	--	<0.01
	05/10/94	0.51	--	--	0.15	<1.0	0.32	<250	<250	--	--	--	<0.01
	08/31/94	<1.0	--	<1.0	2.8	<1.0	0.38	<200	<200	--	--	6.5	<0.01
	11/01/94	0.28	--	<1.0	1.8	<10	0.27	<200	<200	--	--	--	--
	02/08/95	1.9	--	<1.0	0.28	<1.0	0.21	<200	<200	--	--	--	<0.01
	02/14/95	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/95	<1.0	--	<1.0	0.34	<1.0	0.45	<200	<200	--	--	--	0.02
	11/08/95	1.7	--	<1.0	3.5	<1.0	0.31	<200	<200	--	--	<5.0	<0.01
	12/20/95	<1.0	--	--	<0.72	<5.2	--	<363	<455	<12	<12	--	--
	05/29/96	0.55	--	<1.0	<0.25	<1.0	0.46	<200	<200	--	--	--	--
	11/12/96	0.37	--	<1.0	0.093	<1.0	0.44	<200	<200	--	--	--	--
	05/13/97	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	--	--	<0.01
	11/05/97	<1.0	--	<1.0	1.3	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	05/08/98	<1.0	--	<1.0	0.57	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	11/04/98	<1.0	--	<1.0	<0.25	<1.0	0.51	<200	<200	--	<10	<5.0	<0.01
	05/04/99	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	11/17/99	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	<5.0	<0.01
	06/07/00	<1.0	--	--	0.97	1.4	<0.5	<200	<200	--	--	--	--
	11/16/00	<1.0	--	<1.0	0.28	<1.0	0.36	<200	<200	<10	<10	<5.0	<0.01
	11/02/01	0.43	--	<1.0	0.15	<1.0	0.55	<200	<200	<10	<10	<5.0	<0.01
	01/07/03	<1.0	--	<1.0	0.48	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/08/03	<1.0	--	<1.0	0.26	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/28/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
11/13/03	--	--	--	--	--	--	--	--	--	--	<5.0	--	
06/23/04	--	--	--	--	--	--	--	--	--	--	--	<0.01	
11/18/04	--	--	--	--	--	--	--	--	--	--	--	0.02	
05/26/05	--	--	--	--	--	--	--	--	--	--	--	<0.01	
11/17/05	<1.0	0.54	<1.0	<0.25	<1.0	1.8	<2.0	<2.0	<1.0	<10	<5.0	<0.01	
05/22/06	<1.0	0.41	<1.0	0.2	1.3	0.91	<2.0	<2.0	<1.0	<10	<5.0	<0.01	
11/29/06	<1.0	0.3	<1.0	0.13	<1.0	1.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01	

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**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
M-15 (cont.)	05/31/07	0.2	0.23	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.1	<11	<5.0	<0.01
	11/13/07	<1.0	0.25	<1.0	<0.25	<1.0	3.7	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/28/08	<1.0	0.39	<1.0	<0.25	<1.0	6.4	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	11/11/08	<1.0	0.34	<1.0	<0.25	<1.0	2.6	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	7.7	2.5	<1.0	20	<1.0	51	2.4	4.0	<1.0	<5.0	7.0	<0.01
	11/17/09	<1.0	5.0	<1.0	1.2	<1.0	72	<2.0	<2.0	<1.0	5.2	<5.0	<0.01
	05/25/10	<1.0	3.8	<1.0	<0.25	<1.0	15	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/16/10	<1.0	12	<1.0	1.2	<1.0	29	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/25/11	<1.0	4.7	<1.0	1.8	<1.0	11	<2.0	<2.0	<1.0	<5.0	6.0	<0.01
	11/16/11	<1.0	2.3	<1.0	0.54	<1.0	3.8	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/24/12	<1.0	<0.25	<1.0	<0.25	<1.0	1.2	<2.0	<2.0	<1.0	<5.0	6.0	<0.01
	11/14/12	<1.0	5.0	<1.0	<0.25	<1.0	3.3	<2.0	<2.0	<0.4	<10	<5.0	<0.01
	05/22/13	<1.0	<0.25	<1.0	<0.25	<1.0	<1.0 d	2.3	2	<0.40	<5.0	<5.0	<0.01
	11/19/13	<1.0	<0.25	--	<0.25	--	0.82	<2.0	<200	<0.40	<5.0	1.4 J	<0.01
	07/17/14	<1.0	6.1	--	0.54	--	4.8	<2.0	<200	<0.40	<5.0	<5.0	<0.01
11/11/14	<0.20	0.44	--	<0.20	--	<0.20	<0.20	<0.20	<0.25	<0.25	2.2	<0.010	
05/20/15	<0.20	1.5	--	<0.20	--	12	<0.20	<0.20	<0.25	<0.25	1.7	<0.010	
11/10/15	0.36	0.64	--	<0.10	--	5.7	<0.10	0.77	<0.25	<0.25	1.5	<0.010	
M-16	12/31/92	67	--	--	3.3	3.4	--	<250	<250	--	--	--	--
	01/20/93	3.1	--	--	0.87	<1.0	--	<250	<250	--	--	--	--
	02/11/93	<1.0	--	--	<0.25	0.08	<0.5	<250	<250	--	--	--	--
	02/02/94	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/10/94	--	--	--	--	--	--	--	--	--	--	--	<0.01
	12/20/95	7.89	--	--	2.26	<5.2	--	<363	<455	<10	<10	--	--
	01/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/29/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	11/17/05	<1.0	3.5	<1.0	0.22	<1.0	1.8	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/22/06	<1.0	11	<1.0	<0.25	<1.0	<0.5	<2.0	6.6	<1.0	<10	<5.0	<0.01
	11/29/06	0.45	20	0.16	<0.25	<1.0	<0.5	<2.0	7.3	<1.0	<10	<5.0	<0.01
	05/30/07	0.28	24	0.35	<0.25	<1.0	<0.5	<2.0	32	<1.0	<10	<5.0	<0.01
	07/03/07	--	--	--	--	--	--	--	27	--	--	--	--
	11/13/07	<1.0	22	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/28/08	<1.0	38	<1.0	<0.25	<1.0	<0.5	<2.0	19	<1.0	<10	<5.0	<0.01
	06/25/08	--	--	--	--	--	--	<2.0	17	<1.0	--	<5.0	--
	11/11/08	<1.0	43	<1.0	0.43	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	<1.0	27	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
05/25/10	<1.0	29	<1.0	<0.25	<1.0	<0.5	<2.0	6.9	<1.0	<5.0	<5.0	<0.01	
11/16/10	<1.0	30	<1.0	0.95	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01	
05/25/11	<1.0	14	<1.0	1.2	2.5	<0.5	<2.0	1.4	<1.0	<5.0	<5.0	<0.01	

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
M-16 (cont.)	11/16/11	<1.0	14	<1.0	<0.25	<1.0	<0.5	<2.0	20	<1.0	<5.0	<5.0	<0.01
	05/24/12	<1.0	13	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/14/12	<1.0	3.8	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<0.4	<10	<5.0	<0.01
	05/22/13	<1.0	7.7	<1.0	<0.25	<1.0	<0.50	<2.0	<2.0	<0.40	<5.0	<5.0	<0.01
	11/19/13	<1.0	7.1	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	1.5 J	<0.01
	07/17/14	<1.0	3.7	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	<5.0	<0.01
	11/11/14	0.57	1.6	--	<0.20	--	<0.20	<0.20	0.33	0.39	<0.25	1.3	<0.010
	05/20/15	<0.20	6.6	--	<0.20	--	<0.20	<0.20	0.39	<0.25	<0.25	1.3	<0.010
11/10/15	<0.10	9.1	--	<0.11	--	0.97	0.72	1.9	<0.25	<0.25	1.7	<0.010	
M-20	02/10/93	<1.0	--	--	<0.25	2.0	<0.5	<250	<250	--	--	--	<0.01
	08/10/93	22	--	--	0.28	<1.0	<0.5	<250	<250	<10	<10	8	<0.01
	11/15/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	02/02/94	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	<0.01
	05/10/94	0.42	--	--	<0.25	2.6	1.1	<250	<250	--	--	--	<0.01
	08/31/94	<1.0	--	0.16	<0.25	0.46	0.13	<200	<200	--	--	9.0	<0.01
	11/01/94	<1.0	--	0.14	0.2	<10	0.2	<200	<200	--	--	--	--
	02/08/95	0.96	--	0.14	<0.25	0.76	<0.5	<200	<200	--	--	--	<0.01
	02/14/95	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/95	3.0	--	0.14	3.9	0.57	0.12	<200	<200	--	--	--	0.03
	11/08/95	<1.0	--	<1.0	<0.25	<1.0	0.12	<200	<200	--	--	6.0	0.02
	12/20/95	<1.0	--	--	<0.72	<5.2	--	<363	<455	<11	<11	--	--
	05/29/96	0.48	--	0.13	<0.25	0.88	0.075	<200	21	--	--	--	--
	11/12/96	0.12	--	<1.0	0.09	<1.0	0.24	<200	<200	--	--	--	--
	05/13/97	<1.0	--	<1.0	0.2	<1.0	<0.5	<200	<200	--	--	--	0.1
	11/05/97	1.2	--	<1.0	0.42	<1.0	0.29	<200	<200	--	<10	--	<0.01
	05/06/98	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	0.02
	11/04/98	<1.0	--	<1.0	0.4	<1.0	<0.5	<200	<200	--	<10	<5.0	<0.01
	05/04/99	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	0.02
	11/17/99	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	<b>60</b>	0.013
	06/09/00	<1.0	--	--	1.7	0.96	<0.5	<200	<200	--	--	--	--
	11/16/00	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	<b>130</b>	<0.01
	11/02/01	<1.0	--	<1.0	0.089	0.66	<0.5	<200	<200	<10	<10	<5.0	<0.01
	01/07/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
07/28/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01	
10/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01	
11/13/03	--	--	--	--	--	--	--	--	--	--	<5.0	--	
06/23/04	--	--	--	--	--	--	--	--	--	--	--	<0.01	
11/18/04	--	--	--	--	--	--	--	--	--	--	--	<0.01	
05/26/05	--	--	--	--	--	--	--	--	--	--	--	<0.01	

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
M-20 (cont.)	11/17/05	<1.0	2.4	<1.0	0.49	<1.0	3.0	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/22/06	<1.0	0.27	<1.0	<0.25	1.3	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	12/04/06	<1.0	0.68	<1.0	<0.25	<1.0	0.29	<2.0	<2.0	<1.0	<10	9.0	<0.01
	05/30/07	<1.0	0.32	<1.0	<0.25	<1.0	0.24	<2.0	<2.0	<1.1	<11	6.0	<0.01
	11/12/07	<1.0	0.94	<1.0	<0.25	<1.0	2.6	<2.0	<2.0	<1.0	<10	9.0	<0.01
	03/18/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	05/29/08	<1.0	0.48	<1.0	0.3	<1.0	<0.5	2.4	<2.0	<1.0	<10	6.0	<0.01
	08/19/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	11/11/08	<1.0	1.2	<1.0	1.6	<1.0	3.3	<2.0	<2.0	<1.0	<10	6.0	<0.01
	05/27/09	<1.0	0.84	<1.0	<0.25	<1.0	2.4	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/17/09	<1.0	2.1	<1.0	1.2	<1.0	3	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/25/10	<1.0	2.1	<1.0	0.94	<1.0	4.3	<2.0	<2.0	<1.0	<5.0	6.0	<0.01
	11/16/10	<1.0	0.42	<1.0	<0.25	<1.0	1.6	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/25/11	<1.0	4.0	<1.0	0.29	<1.0	8.2	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/16/11	<1.0	1.7	<1.0	0.78	<1.0	1.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/24/12	<1.0	0.94	<1.0	<0.25	<1.0	0.88	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/14/12	<1.0	1.1	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<0.4	<10	<5.0	0.03
	05/22/13	7.6	1.2	<1.0	1.1	<1.0	<0.50	<2.0	<2.0	<0.40	<5.0	<b>60</b>	<0.01
11/19/13	<1.0	0.48	--	<0.25	--	0.62	<2.0	<200	<0.40	<5.0	1.1 J	<0.01	
07/17/14	<1.0	1.7	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	<5.0	<0.01	
11/11/14	<0.20	0.59	--	<0.20	--	<0.20	<0.20	<0.20	<0.25	<0.25	1.3	<0.010	
05/20/15	<0.20	2.5	--	<0.20	--	12	<0.20	<0.20	<0.25	<0.25	1.6	<0.010	
11/10/15	<0.10	1.5	--	<0.10	--	4.9	<0.10	<0.10	<0.25	<0.25	1.4	<0.010	
OBS-1	05/20/15	--	--	--	--	--	--	--	110 d	--	--	9.7	--
	11/10/15	0.32	25	--	<0.10	--	13	<0.10	110 d	--	--	<b>13</b>	--
OBS-2	02/11/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	<0.01
	08/11/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	<10	<10	<b>60</b>	<0.01
	11/16/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	02/03/94	<1.0	--	--	<0.25	0.28	<0.5	<250	<250	--	--	--	<0.01
	05/11/94	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	<0.01
	08/31/94	<1.0	--	0.87	<0.25	<1.0	<0.5	<250	<250	--	--	<b>64</b>	<0.01
	11/02/94	<1.0	--	0.94	<0.25	<1.0	<0.5	<200	<200	--	--	--	--
	02/08/95	<1.0	--	0.55	<0.25	<1.0	<0.5	<200	<200	--	--	--	<0.01
	02/14/95	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/95	0.81	--	2.6	0.087	0.41	<0.5	<200	<200	--	--	--	0.03
	11/08/95	0.27	--	3.3	<0.25	0.52	<0.5	<200	42	--	--	<b>88</b>	0.04
	12/20/95	<2.0	--	--	<0.72	<5.2	--	<363	<455	<12	<12	--	--
	05/29/96	0.12	--	1.8	<0.25	0.22	<0.5	<200	<200	--	--	--	--
11/12/96	0.39	--	0.79	<0.25	0.73	<0.5	<200	<200	--	--	--	--	

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 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
OBS-2 (cont.)	05/13/97	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	--	--	0.02
	05/19/97	--	--	--	--	--	--	--	--	--	--	--	--
	11/05/97	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	--	--	<0.01
	05/06/98	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	0.02
	11/04/98	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	<b>82</b>	<0.01
	05/04/99	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	0.03
	11/17/99	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	06/08/00	<1.0	--	--	<0.25	<1.0	<0.5	<200	<200	--	--	--	--
	11/16/00	<1.0	--	<1.0	<0.25	0.75	<0.5	<200	<200	<10	<10	<b>164</b>	<0.01
	05/30/01	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	--	--	<0.01
	05/31/01	--	--	--	--	--	--	--	--	<10	<10	--	--
	11/02/01	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	<b>37</b>	<0.01
	01/07/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/28/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	11/13/03	--	--	--	--	--	--	--	--	--	--	<b>40</b>	--
	06/23/04	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/18/04	--	--	--	--	--	--	--	--	--	--	--	0.02
	05/26/05	<1.0	--	45	<0.25	<1.0	<0.5	<2.0	43	<1.0	<10	<b>118</b>	<0.01
	11/17/05	<1.0	28	1.2	0.39	<1.0	<0.5	<2.0	60	<1.0	<10	<b>215</b>	<0.01
	05/22/06	0.79	42	2.1	<0.25	<1.0	<0.5	<2.0	55	<1.0	<10	<b>101</b>	<0.01
	07/19/06	--	--	--	--	--	--	--	64	--	--	--	--
	12/04/06	<1.0	23	1.4	<0.25	<1.0	<0.5	<2.0	12	<1.0	<10	<b>73</b>	<0.01
	05/30/07	0.56	36	2.5	0.26	0.39	<0.5	<2.0	140	<1.1	<11	<b>87</b>	<0.01
	07/03/07	--	--	--	--	--	--	--	86	--	--	--	--
	11/12/07	<1.0	45	3.9	<0.25	<1.0	<0.5	<2.0	91	<1.0	<10	<b>167</b>	<0.01
	03/18/08	--	--	--	--	--	--	<2.0	27	<1.0	--	<b>293</b>	--
	05/29/08	<1.0	36	3.5	<0.25	0.66	<0.5	<2.0	70	<1.0	<10	<b>255</b>	<0.01
	08/19/08	--	--	--	--	--	--	<2.0	74	<1.0	--	<b>209</b>	--
	11/11/08	<1.0	32	2.3	<0.25	<1.0	<0.5	<2.0	160	<1.0	<10	<b>238</b>	<0.01
	05/27/09	<1.0	28	2.3	<0.25	<1.0	<0.5	<2.0	94	<1.0	<5.0	<b>118</b>	0.14
	11/17/09	<1.0	28	2.6	<0.25	<1.0	<0.5	<2.0	101	<1.0	5.1	<b>199</b>	<0.01
	05/25/10	<1.0	28	3.2	0.46	<1.0	<0.5	<2.0	10	<1.0	<5.0	<b>227</b>	0.02
	11/16/10	<1.0	41	1.5	0.80	<1.0	<0.5	<2.0	38	<1.0	--	<b>48</b>	<0.01
	05/25/11	<1.0	45	2.3	0.29	2.2	<0.5	<2.0	114	<1.0	<5.0	<b>61</b>	0.02
	11/16/11	<1.0	46	<1.0	<0.25	<1.0	<0.5	<2.0	67	<1.0	<5.0	<b>22</b>	<0.01
	01/05/12	--	--	--	--	--	--	--	25	--	--	<b>22</b>	--
	05/24/12	<1.0	32	1.7	<0.25	<1.0	<0.5	<2.0	38	1.1	<5.0	<b>175</b>	0.02

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
DEQ-7 Standard		70	1,000	70	200	300	500	4.0	300	5.5*	4.6	10	0.3
EPA RSL										0.52**			
OBS-2 (cont.)	11/14/12	<1.0	27	<1.0	<0.25	<1.0	<0.5	<2.0	3.8	<0.4	<10	18	<0.01
	05/22/13	<1.0	28	<1.0	<0.25	<1.0	<0.50	<2.0	4.4	1.0	<5.0	13	<0.01
	11/19/13	<1.0	42	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	19	0.017
	07/17/14	<1.0	35	--	<0.25	--	<0.50	104	<200	<0.40	<5.0	95	<0.01
	08/13/14 R	--	--	--	--	--	--	<2.0	--	--	--	--	--
	11/11/14	<0.20	7	--	<0.20	--	<0.20	<0.20	14	1.1	<0.25	46	<0.010
	05/20/15	<0.20	61 d	--	<0.20	--	<0.20	<0.20	37 d	<0.25	<0.25	50	<0.010
11/10/15	<0.10	49 d	--	<0.10	--	4.2	<0.10	34 d	<0.25	<0.25	23	<0.010	
OBS-4	12/31/92	0.6	--	--	<0.25	2.8	--	<250	<250	--	--	--	--
	01/20/93	<1.0	--	--	<0.25	<1.0	--	<250	<250	--	--	--	--
	02/11/93	0.3	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	02/02/94	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/11/94	--	--	--	--	--	--	--	--	--	--	--	<0.01
	02/08/95	--	--	--	--	--	--	--	--	--	--	--	<0.01
	08/17/95	--	--	--	--	--	--	--	--	--	--	--	0.03
	11/09/95	--	--	--	--	--	--	--	--	--	--	--	<0.01
	12/20/95	<2.0	--	--	<0.72	<5.2	--	<363	<455	27	<11	--	--
	01/08/03	2.5	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	02/11/03	--	--	--	--	--	--	2.7	10	--	--	--	--
	04/08/03	<10	--	<10	<2.0	<10	<5.0	<2,000	<2,000	46	<10	--	<0.01
	07/28/03	1.6	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	3.8	--	<0.01
	10/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	06/23/04	<1.0	45	0.31	24	1.3	<0.5	<200	<200	34	<10	--	--
	11/18/04	2.4	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	--
	05/26/05	1.8	214	<1.0	2.3	1.3	<0.5	1.0	14	--	<10	--	--
	11/17/05	3.0	61	<1.0	2.2	<1.0	<0.5	<2.0	12	59	<10	16	<0.01
	05/22/06	<1.0	89	0.75	0.45	<1.0	<0.5	<2.0	8.7	46	<10	25	<0.01
	12/04/06	<1.0	54	0.48	<0.25	<1.0	<0.5	<2.0	9.1	96	<10	6.0	<0.01
05/30/07	21	24	<1.0	2.4	<1.0	0.53	16	7.8	8.5	<13	9.0	0.02	
11/12/07	<1.0	18	<1.0	0.23	<1.0	0.57	<2.0	2.7	26	<10	<5.0	<0.01	
03/18/08	--	--	--	--	--	--	3.6	49	5.6	--	9.0	--	
05/29/08	2.4	155	<1.0	7.9	<1.0	<1.0	7.6	<2.0	2.3	<10	7.0	<0.01	
08/19/08	--	--	--	--	--	--	<2.0	3.1	52	--	6.0	--	
11/11/08	<1.0	31	<1.0	3.2	<1.0	4.9	<2.0	<2.0	4.0	<10	6.0	<0.01	
05/27/09	1.1	52	<1.0	<0.25	<1.0	1.1	<2.0	3.0	217	<5.0	34	<0.01	
11/17/09	1.3	32	<1.0	3.5	<1.0	3.0	<2.0	6.9	9.1	5.2	12	<0.01	
05/25/10	2.4	27	<1.0	3.4	<1.0	1.0	<2.0	2.5	29	<5.0	18	<0.01	
11/16/10	3.5	6.2	<1.0	5.3	19	<0.5	<2.0	4.6	7.1	<5.0	9.0	<0.01	
05/25/11	<1.0	18	<1.0	0.28	<1.0	<0.5	<2.0	2.9	46	<5.0	7.0	<0.01	

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
OBS-4 (cont.)	11/16/11	<1.0	6.6	<1.0	8.5	<1.0	1.3	<2.0	5.1	4.2	<5.0	8.0	<0.01
	05/24/12	<1.0	20	<1.0	<0.25	<1.0	0.24	<2.0	<2.0	<b>46</b>	<5.0	<b>12</b>	<0.01
	05/24/12 D	<1.0	19	<1.0	<0.25	<1.0	0.22	<2.0	<2.0	<b>36</b>	<5.0	<b>14</b>	<0.01
Well Abandoned 10/26/2012													
OBS-4R	11/14/12	1.7	730	<1.0	<0.25	<1.0	1.0	<2.0	2.2	<b>49</b>	<10	<b>16</b>	<0.01
	05/22/13	<10	693	<1.0	<2.5	<1.0	<1.5 d	<2.0	5.9	<b>121</b>	<5.0	<b>24</b>	0.01
	05/22/13 D	<10	663	<1.0	<2.5	<1.0	<2.5	<2.0	14	<b>87</b>	<5.0	<b>32</b>	0.01
	11/19/13	<1.0	190	--	<2.0	--	<1.0	<2.0	<200	<b>76</b>	<5.0	<b>20</b>	0.010
	11/19/13 D	<1.0	180	--	<3.0	--	<1.0	<2.0	<200	<b>109</b>	<5.0	<b>20</b>	0.0066
	07/17/14	<1.0	60	--	<0.25	--	1.3	<2.0	<200	<b>62</b>	<5.0	<b>14</b>	<0.01
	07/17/14 D	<1.0	57	--	<0.25	--	1.0	<2.0	<200	<b>41</b>	<5.0	<b>19</b>	<0.01
	11/11/14	<0.20	14	--	<0.20	--	<0.20	<0.20	3.7	<b>71</b>	<2.5	<b>19</b>	0.022
	11/11/14 D	<0.20	56	--	<0.20	--	1.1	<0.20	16	<b>84</b>	<2.5	<b>18</b>	--
	05/20/15	<0.20	160 d	--	<0.20	--	17	<0.20	15	80 d	<0.25	<b>21</b>	<0.010
	05/20/15 D	<0.20	220 d	--	<0.20	--	23	<0.20	22	67 d	<0.25	<b>19</b>	<0.010
11/10/15	0.22	250 d	--	0.14	--	17	<0.10	24 d	26 d	<0.25	<b>21</b>	0.010	
11/10/15 D	0.23	270 d	--	0.17	--	18	<0.10	26 d	20 d	<0.26	<b>20</b>	<0.010	
OBS-6	02/10/93	--	--	--	--	--	--	--	--	--	--	--	0.12
	11/16/93	11	--	--	9.8	10	<0.5	<250	<250	--	--	--	--
	02/03/94	52	--	--	4.4	7.9	<0.5	<250	<250	--	--	--	--
	03/29/94	--	--	--	--	--	--	--	--	--	--	--	0.11
	05/11/94	0.75	--	--	7.1	68	<0.5	<250	<250	--	--	--	--
	02/09/95	--	--	--	--	--	--	--	--	--	--	--	0.27
	02/14/95	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/95	--	--	--	--	--	--	--	--	--	--	--	<b>1.16</b>
	11/09/95	--	--	--	--	--	--	--	--	--	--	--	0.26
	12/19/95	4.86	--	--	33.4	<5.2	--	<363	<455	<11	<11	--	--
	05/13/97	--	--	--	--	--	--	--	--	--	--	--	0.07
	11/05/97	--	--	--	--	--	--	--	--	--	--	--	<b>0.56</b>
	05/06/98	--	--	--	--	--	--	--	--	--	--	--	<b>14</b>
	11/04/98	--	--	--	--	--	--	--	--	--	--	--	<b>0.64</b>
	05/04/99	--	--	--	--	--	--	--	--	--	--	--	0.03
	11/17/99	--	--	--	--	--	--	--	--	--	--	--	0.07
	06/09/00	13	--	--	67	35	<5.0	<2,000	<2,000	--	--	--	--
11/17/00	--	--	--	--	--	--	--	--	--	--	--	--	<0.01
05/30/01	--	--	--	--	--	--	--	--	--	--	--	--	0.15
11/02/01	--	--	--	--	--	--	--	--	--	--	--	--	0.09
01/09/03	<1.0	--	<1.0	2.4	<1.0	<0.5	<200	<200	--	<10	--	--	<b>0.35</b>
04/09/03	0.84	--	<1.0	2.8	3.2	<0.5	<200	<200	<10	<10	--	--	<0.01
07/29/03	<1.0	--	<1.0	3.6	6.2	<0.5	<200	<200	--	<10	--	--	0.06

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
OBS-6R (cont.)	10/07/03	5.4	--	<1.0	42	99	<0.5	<200	<200	--	<10	--	0.06
	11/13/03	<b>177</b>	--	<1.0	14	32	<0.5	<200	<200	--	<10	--	0.06
	06/23/04	0.61	0.22	<1.0	--	--	<0.5	<200	<200	<10	<10	<5.0	--
	11/18/04	<b>75</b>	--	<10	167	160	<5.0	<2,000	<2,000	<10	--	<5.0	--
	05/26/05	30	0.84	<1.0	30	49	<0.5	<b>18</b>	8.0	<1.0	<10	<5.0	--
	11/17/05	7.3	1.2	<1.0	78	69	<0.5	<b>10</b>	13	<1.0	<10	<b>13</b>	<b>0.94</b>
	05/22/06	18	2.3	<1.0	10	15	<0.5	<b>21</b>	<2.0	<1.0	<10	<5.0	0.16
	12/04/06	50	2.5	<1.0	31	18	<0.5	<b>55</b>	2.2	<1.0	<10	<5.0	0.17
	07/03/07	<1.0	--	--	6.7	--	--	<2.0	3.7	--	--	--	--
	11/13/07	36	3.2	<1.0	2.8	3.1	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/28/08	1.1	3.4	<1.0	0.65	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	11/11/08	1.3	4.7	<1.0	0.3	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	<1.0	24	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/17/09	<1.0	22	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/25/10	<1.0	25	<1.0	0.46	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/16/10	2.4	24	<1.0	2.4	1.4	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/25/11	1.9	6.7	<1.0	1.2	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/16/11	<1.0	15	<1.0	0.43	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/24/12	<1.0	10	<1.0	0.41	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/14/12	1.5	8.7	<1.0	0.29	<1.0	<0.5	<2.0	<2.0	<0.4	<5.0	<5.0	<0.01
05/22/13	<1.0	17	<1.0	<0.25	<1.0	<0.50	<2.0	<2.0	<0.40	<5.0	<5.0	<0.01	
11/19/13	<1.0	3.4	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	1.2 J	<0.01	
07/17/14	<1.0	6.7	--	0.58	--	<0.50	<2.0	<200	<0.40	<5.0	<5.0	<0.01	
11/11/14	<0.20	1.8	--	0.62	--	<0.20	<0.20	<0.20	0.73	<0.25	1.2	<0.010	
05/20/15	<0.20	15	--	0.43	--	<0.20	<0.20	<0.20	<0.25	<0.25	1.2	<0.010	
11/10/15	<0.10	2.7	--	2.3	--	0.28	<0.10	<0.10	<0.25	<0.25	1.4	<0.010	
OBS-7	12/31/92	<b>9,000</b>	--	--	2,000	550	--	<25,000	<25,000	--	--	--	--
	01/28/93	<b>2,200</b>	--	--	710	230	--	<25,000	<25,000	--	--	--	--
	02/11/93	<b>2,500</b>	--	--	550	160	<50	<25,000	<100,000	--	--	--	--
	08/11/93	<1.0	--	--	<0.25	12	<0.5	<250	<250	<10	<10	<b>60</b>	0.04
	11/16/93	<1.0	--	--	14	19	<0.5	<250	<250	--	--	--	--
	02/03/94	<b>1,000</b>	--	--	3.8	21	<0.5	<250	<250	--	--	--	<b>9.35</b>
	03/29/94	--	--	--	--	--	--	--	--	--	--	--	<b>7.3</b>
	05/11/94	13	--	--	37	42	<0.5	<250	<250	--	--	--	0.29
	09/01/94	<1.0	--	0.17	1.2	14	<0.5	<200	<200	--	--	<b>10</b>	0.06
	11/02/94	0.63	--	0.14	5.6	15	<0.5	<200	<200	--	--	--	--
	02/09/95	<b>270</b>	--	12	45	98	<2.5	<1,000	<b>600</b>	--	--	--	0.27
	02/14/95	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/95	7.7	--	0.2	10	140	<0.5	<200	<b>2,300</b>	--	--	--	<b>0.49</b>
11/09/95	1.9	--	0.16	72	240	0.3	<200	<b>2,800</b>	--	--	<b>44</b>	<b>0.7</b>	

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 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)	
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate			
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>	
<b>EPA RSL</b>										<b>0.52**</b>				
OBS-7 (cont.)	12/19/95	<2.0	--	--	130	53.8	--	<363	<455	<11	<11	--	--	
	05/29/96	22	--	0.17	41	150	<0.5	<b>51</b>	<b>3,700</b>	--	--	--	--	
	11/12/96	18	--	<1.0	1.4	5.4	<0.5	<200	<b>624</b>	--	--	--	--	
	05/13/97	<b>943</b>	--	<1.0	82	0.97	<0.5	<200	<200	--	--	--	0.03	
	11/05/97	1.2	--	<1.0	3.4	<1.0	<0.5	<200	<b>1,700</b>	--	<10	--	<b>0.44</b>	
	05/06/98	23	--	<1.0	67	106	<0.5	<200	<200	--	1.3	--	<b>5.9</b>	
	11/04/98	<1.0	--	<1.0	12	138	<0.5	<200	<b>3,070</b>	--	<10	6.0	<b>4.5</b>	
	05/04/99	6.6	--	<1.0	3.8	20	<0.5	<200	<b>661</b>	--	<10	--	0.08	
	11/17/99	<1.0	--	<1.0	<0.25	2.7	<1.0	<200	<b>812</b>	--	<10	--	--	
	06/09/00	<1.0	--	--	3.2	5.3	<0.5	<200	<b>1,300</b>	--	--	--	--	
	11/17/00	<1.0	--	<1.0	2.1	4.8	<0.5	<200	<b>2,650</b>	<10	<10	<b>19</b>	0.04	
	05/30/01	17	--	<1.0	0.53	7.0	<0.5	<200	<b>796</b>	<10	<10	--	0.02	
	11/02/01	<1.0	--	<1.0	<0.25	1.8	<0.5	<200	<b>1,120</b>	<10	<10	8.0	0.02	
	01/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<b>1,500</b>	--	<10	--	<0.01	
	04/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<b>481</b>	<10	<10	--	<0.01	
	07/29/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	0.02	
	10/07/03	<1.0	--	<1.0	<0.25	2.8	<0.5	<200	<b>1,010</b>	--	<10	--	<0.01	
	11/13/03	--	--	--	--	--	--	--	--	--	--	--	<5.0	--
	06/23/04	<1.0	4.9	<1.0	0.45	1.5	<0.5	<200	285	<10	<10	<5.0	--	--
	11/18/04	0.8	--	<1.0	1.4	<1.0	<0.5	<200	<b>600</b>	<10	--	<b>47</b>	--	--
05/26/05	<1.0	1.8	<1.0	<0.25	<1.0	<0.5	<2.0	280	<1.0	<10	<b>13</b>	--	--	
11/17/05	0.95	2.1	<1.0	<0.25	<1.0	<0.5	<2.0	180	<1.0	<10	<b>70</b>	<0.01	<0.01	
05/22/06	<1.0	0.34	<1.0	<0.25	<1.0	<0.5	<2.0	200	<1.0	<10	<b>48</b>	<0.01	<0.01	
11/29/06	<1.0	0.39	<1.0	<0.25	<1.0	<0.5	<2.0	270	<1.0	<10	<b>13</b>	<0.01	<0.01	
OBS-7R	05/31/07	0.42	1.2	<1.0	<0.25	0.5	<0.5	<2.0	130	<1.0	<10	<5.0	<0.01	
	11/12/07	<1.0	0.24	<1.0	<0.25	<1.0	<0.5	<2.0	5.2	<1.0	<10	<5.0	<0.01	
	05/29/08	<1.0	4.4	<1.0	<0.25	<1.0	0.62	<2.0	<2.0	<1.0	<10	<5.0	<0.01	
	06/25/08	--	--	--	--	--	--	2.4	<2.0	<1.0	--	<5.0	--	
	07/22/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--	
	08/19/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--	
	09/17/08	--	--	--	--	--	--	--	--	<1.0	--	<5.0	--	
	10/14/08	--	--	--	--	--	--	<2.0	4.1	<1.0	--	<5.0	--	
	11/12/08	1.1	<0.25	<1.0	0.56	<1.0	<0.5	<2.0	<2.0	<1.1	<11	<5.0	<0.01	
	05/27/09	<1.0	0.39	<1.0	<0.25	<1.0	1.6	<2.0	<2.0	<1.0	<5.0	<5.0	0.02	
	11/17/09	<1.0	<0.25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01	
	05/25/10	<1.0	0.81	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01	
	11/16/10	1.8	<0.25	<1.0	0.64	<1.0	5.2	<2.0	2.9	<1.0	<5.0	<5.0	<0.01	
	05/25/11	<1.0	1.1	<1.0	0.84	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01	
	11/16/11	<1.0	0.34	<1.0	0.74	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01	

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
OBS-7R (cont.)	05/24/12	<3.0	0.44	<1.0	0.49	<1.0	1.3	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/14/12	<1.0	1.0	<1.0	0.32	<1.0	<0.5	<2.0	<2.0	<0.4	<10	<5.0	<0.01
	11/14/12 D	1.4	1.1	<1.0	0.81	<1.0	<0.5	<2.0	<2.0	<0.4	<10	<5.0	<0.01
	05/22/13	1.6	1.8	<1.0	1.1	<1.0	<0.50	<2.0	<2.0	<0.4	<5.0	<5.0	<0.01
Well Abandoned 09/12/13													
OBS-9	12/19/95	<2.0	--	--	2.93	<5.2	--	<363	<455	<12	<12	--	--
	01/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<b>53</b>	<10	--	0.02
	07/29/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	0.02
	10/07/03	<1.0	--	<1.0	<0.25	2.0	<0.5	<200	<200	--	<10	--	0.02
	06/23/04	<1.0	2.2	<1.0	<0.25	<1.0	<0.5	<200	<200	<b>18</b>	<10	<5.0	--
	11/18/04	1.4	--	<1.0	2.8	<1.0	<0.5	<200	<200	<b>38</b>	--	<5.0	--
	05/26/05	<1.0	2.2	<1.0	<0.25	<1.0	<0.5	<2.0	6.7	<b>18</b>	<10	<5.0	--
	11/17/05	<1.0	3.8	<1.0	<0.25	<1.0	<0.5	<2.0	10	<b>23</b>	<10	<5.0	<0.01
	05/22/06	<1.0	7.2	<1.0	<0.25	<1.0	<0.5	<2.0	46	<b>24</b>	<10	<5.0	0.02
	11/29/06	3.5	7	<1.0	0.42	<1.0	<0.5	<2.0	2.9	<1.0	<10	<5.0	<0.01
	05/31/07	0.27	6.3	<1.0	<0.25	<1.0	<0.5	<2.0	16	<b>19</b>	<11	<5.0	<0.01
	11/12/07	<1.0	7.0	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<b>31</b>	<10	<5.0	<0.01
	05/28/08	<1.0	9.8	<1.0	<0.25	<1.0	<0.5	<2.0	26	<b>18</b>	<10	<5.0	<0.01
	07/22/08	--	--	--	--	--	--	<2.0	20	<b>23</b>	--	<5.0	--
	09/17/08	--	--	--	--	--	--	--	--	<b>33</b>	--	<5.0	--
	10/14/08	--	--	--	--	--	--	<2.0	20	<b>23</b>	--	<5.0	--
	11/12/08	1.6	4.6	<1.0	1.0	<1.0	<0.5	<2.0	6.1	<b>5.7</b>	<11	<5.0	<0.01
	05/27/09	<1.0	11	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<b>21</b>	<5.0	<5.0	<0.01
	11/17/09	<1.0	8.0	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<b>25</b>	<b>5.1</b>	<5.0	<0.01
05/25/10	<1.0	21	<1.0	<0.25	<1.0	<0.5	<2.0	2.5	<b>7.6</b>	<5.0	<5.0	<0.01	
11/16/10	<1.0	6.2	<1.0	0.39	1.7	5.2	<2.0	9.4	<b>29</b>	<5.0	<5.0	<0.01	
05/25/11	<1.0	27	<1.0	0.37	<1.0	<0.5	<2.0	7.8	<b>8.7</b>	<5.0	<5.0	<0.01	
11/16/11	<1.0	9.4	<1.0	0.54	<1.0	<0.5	<2.0	11	<b>22</b>	<5.0	<5.0	<0.01	
05/24/12	<1.0	11	<1.0	<0.25	<1.0	0.2	<2.0	5.7	<b>8.0</b>	<5.0	<5.0	<0.01	
11/14/12	<1.0	8.4	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<b>7.6</b>	<10	<5.0	0.01	
05/22/13	<1.5	8.6	<1.0	<0.25	<1.0	<0.50	<2.0	4.2	<b>6.3</b>	<5.0	<5.0	<0.01	
11/19/13	<1.0	4.4	--	<0.25	--	<0.50	<2.0	<200	<b>5.6</b>	<5.0	1.2	--	
Well Abandoned 03/23/14													
OBS-11	12/21/95	<2.0	--	--	<0.72	<5.2	--	<363	<455	--	--	--	--
	01/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/28/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
11/17/05	<1.0	1.3	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<b>15</b>	<0.01	

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
OBS-11 (cont.)	05/22/06	<1.0	2.7	<1.0	<0.25	0.85	<0.5	<2.0	2.4	<1.0	<10	<b>18</b>	<0.01
	12/04/06	<1.0	3.6	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/30/07	<1.0	3.6	<1.0	0.23	<1.0	<0.5	<2.0	<2.0	<1.2	<12	<b>12</b>	<0.01
	11/12/07	<1.0	5.0	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	1.1	<10	<b>26</b>	<0.01
	03/18/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	8.0	--
	05/29/08	<1.0	11	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	8.0	<0.01
	07/22/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	08/19/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	09/17/08	--	--	--	--	--	--	--	--	<1.0	--	<5.0	--
	10/14/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	11/11/08	<1.0	7.8	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	<1.0	31	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/17/09	<1.0	25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<b>15</b>	<0.01
	05/25/10	<1.0	48	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	6.0	<0.01
	11/16/10	<1.0	45	<1.0	1.3	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<b>32</b>	<0.01
	05/25/11	<1.0	42	<1.0	0.66	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<b>42</b>	<0.01
	11/16/11	<1.0	23	<1.0	0.96	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<b>20</b>	<0.01
05/24/12	<1.0	16	<1.0	0.3	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<b>16</b>	<0.01	
11/14/12	5.0	9.0	<1.0	0.26	<1.0	<0.5	<2.0	<2.0	<0.4	<10	<5.0	<0.01	
05/22/13	<1.0	10	<1.0	<0.50 d	<1.0	<0.50	<2.0	4.2	<0.40	<5.0	6.0	<0.01	
11/19/13	<1.0	4.0	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	1.3 J	<0.01	
07/17/14	<1.0	6.0	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	<5.0	<0.01	
11/11/14	<0.20	2.4	--	<0.20	--	<0.20	<0.20	0.44	0.79	<0.25	1.1	<0.010	
05/20/15	<0.20	29 d	--	0.47	--	<0.20	<0.20	3.3	<0.25	<0.25	1.1	<0.010	
11/10/15	<0.10	16	--	5.8	--	1.7	<0.10	1.6	<0.25	<0.25	0.99 J	<0.010	
OBS-14	12/31/92	<1.0	--	--	<0.25	1.9	--	<250	<250	--	--	--	--
	01/20/93	<1.0	--	--	<0.25	<1.0	--	<250	<250	--	--	--	--
	12/20/95	<2.0	--	--	<0.72	<5.2	--	<363	<455	--	<11	--	--
	01/09/03	1.4	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/10/03	0.89	--	<1.0	0.19	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/29/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/07/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	11/17/05	<1.0	<0.25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/22/06	<1.0	<0.25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	11/29/06	0.89	<0.25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/31/07	0.32	0.095	<1.0	<0.25	<1.0	<0.5	<b>4.0</b>	<2.0	<1.0	<10	<5.0	<0.01
	11/12/07	<1.0	<0.25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/28/08	<1.0	0.28	<1.0	0.56	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
06/25/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--	
08/19/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--	

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 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
OBS-14 (cont.)	10/14/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	11/11/08	3.2	<0.25	<1.0	0.62	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	<1.0	<0.25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/17/09	<1.0	<0.25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/25/10	<1.0	<0.25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/16/10	<1.0	<0.25	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<b>5.3</b>	<5.0	<0.01
	05/25/11	1.2	<0.25	<1.0	0.6	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/16/11	<1.0	<0.25	<1.0	0.57	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/24/12	<1.5	1.8	<1.0	<0.25	<1.0	0.67	<2.0	<2.0	<1.0	2.4	<5.0	<0.01
	11/14/12	1.2	1.6	<1.0	1.7	<1.0	1.1	<2.0	<2.0	<0.4	<b>7.6</b>	<5.0	<0.01
05/22/13	<1.0	0.93	<1.0	<0.25	<1.0	<0.50	<2.0	<2.0	<0.4	<5.0	<5.0	<0.01	
Well Abandoned 09/12/13													
OBS-18	12/19/95	<2.0	--	--	<0.72	<5.2	--	<363	<455	--	<11	--	--
	01/08/03	5.5	--	<1.0	1.6	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/09/03	1.2	--	<1.0	1.5	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/29/03	2.6	--	<1.0	5.2	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/07/03	<b>811</b>	--	<1.0	117	<1.0	<0.5	<200	<200	--	3.6	--	0.02
	06/23/04	55	0.73	<1.0	3.2	<1.0	<0.5	<200	<200	<10	<10	<5.0	--
	11/01/04	0.69	--	<1.0	2.4	<1.0	<0.5	<200	<200	<10	--	<5.0	--
	05/26/05	18	4.8	<1.0	2.1	<1.0	<0.5	<b>4.7</b>	<2.0	<1.0	<10	<5.0	--
	11/17/05	1.5	6.2	<1.0	1.3	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/22/06	17	18	<1.0	8.5	1.1	1.3	<b>5.1</b>	3.7	<1.0	<10	<5.0	<0.01
	12/04/06	<1.0	27	<1.0	1.3	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/30/07	26	23	<1.0	1.8	<1.0	4.0	<b>6.1</b>	1.0	<1.1	<11	<5.0	0.02
	11/12/07	0.78	22	<1.0	<0.25	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	03/18/08	--	--	--	--	--	--	<b>220</b>	43	<1.0	--	<5.0	--
	05/29/08	<b>222</b>	83	<1.0	6.3	<1.0	0.54	<b>18</b>	<2.0	<1.0	<10	<5.0	<0.01
	06/25/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	07/22/08	51	--	--	--	--	--	<b>11</b>	--	--	--	--	--
	08/19/08	--	--	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	11/11/08	1.2	27	<1.0	<1.0	<1.0	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	3.0	22	<1.0	1.7	1.3	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
11/17/09	<1.0	16	<1.0	1.2	1.1	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01	
05/25/10	<1.0	<0.25	<1.0	2.2	6.7	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01	
11/16/10	5.9	13	<1.0	3.0	1.5	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01	
05/25/11	<b>1,600</b>	3.7	<1.0	14	<1.0	<0.5	<b>314</b>	19	<1.0	<5.0	<5.0	0.06	
11/16/11	1.5	5.7	<1.0	1.5	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	0.02	
05/24/12	1.7	2.6	<1.0	0.43	<1.0	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01	
11/14/12	5.2	1.7	<1.0	3.3	<1.0	<0.5	2.0	<2.0	<0.4	<5.0	<5.0	<0.01	
05/22/13	3.2	4.20	<1.0	0.64	<1.0	<0.50	<2.0	<2.0	<0.40	<5.0	<5.0	<0.01	
11/19/13	<1.0	0.94	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	1.4 J	<0.01	

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
OBS-18 (cont.)	07/17/14	<1.0	0.81	--	<0.25	--	<0.50	<2.0	<200	<0.40	<5.0	<5.0	<0.01
	11/11/14	<0.20	0.79	--	<0.20	--	<0.20	<0.20	<0.20	<0.25	<0.25	1.6	<0.010
	05/20/15	<0.20	2.5	--	<0.20	--	<0.20	<0.20	<0.20	<0.25	<0.25	1.8	<0.010
	11/10/15	<0.10	3.2	--	0.91	--	0.29	<0.10	<0.10	<0.25	<0.25	1.8	<0.010
OBS-21	12/19/95	<2.0	--	--	<0.72	<5.2	--	<363	<455	<10	<10	--	<0.01
	01/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/10/03	0.56	--	<1.0	0.43	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/29/03	<1.0	--	<1.0	0.68	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/09/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	11/17/05	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/22/06	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/29/06	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/31/07	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/13/07	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/28/08	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/11/08	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/27/09	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/17/09	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/25/10	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/16/10	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/25/11	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/15/11	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/24/12	--	--	--	--	--	--	--	--	--	--	<5.0	0.01
	11/14/12	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01
05/22/13	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01	
11/19/13	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01	
07/17/14	--	--	--	--	--	--	--	--	--	--	<5.0	<0.01	
11/11/14	--	--	--	--	--	--	--	--	--	--	--	--	
05/20/15	--	--	--	--	--	--	--	--	--	--	--	0.91 J	<0.010
11/10/15	--	--	--	--	--	--	--	--	--	--	--	0.52 J	<0.010
<b>OFFSITE CONTINGENCY WELLS</b>													
M-3BA	02/10/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	08/10/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	11/15/93	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	02/02/94	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	05/10/94	<1.0	--	--	<0.25	<1.0	<0.5	<250	<250	--	--	--	--
	12/21/95	<2.0	--	--	<0.72	<5.2	--	<363	<455	--	--	--	--
	05/13/97	--	--	--	--	--	--	--	--	--	--	--	<0.1
	11/05/97	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/06/98	--	--	--	--	--	--	--	--	--	--	--	0.02
	11/04/98	--	--	--	--	--	--	--	--	--	--	--	<0.01

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
M-3BA (cont.)	05/04/99	--	--	--	--	--	--	--	--	--	--	--	0.02
	11/17/99	--	--	--	--	--	--	--	--	--	--	--	0.02
	06/07/00	<1.0	--	--	<0.25	<1.0	<0.5	<200	<200	--	--	--	--
	11/17/00	--	--	--	--	--	--	--	--	--	--	--	<0.01
	05/30/01	--	--	--	--	--	--	--	--	--	--	--	<0.01
	11/02/01	--	--	--	--	--	--	--	--	--	--	--	<0.01
	01/07/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	04/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	<10	<10	--	<0.01
	07/28/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	10/08/03	<1.0	--	<1.0	<0.25	<1.0	<0.5	<200	<200	--	<10	--	<0.01
	12/04/06	--	--	--	--	--	--	--	--	--	--	<5.0	--
	03/18/08	--	--	--	--	--	--	<2.0	3.6	<1.0	--	<5.0	--
	05/29/08	--	--	--	--	--	--	<2.0	2.2	<1.0	--	<b>13</b>	--
	08/19/08	--	--	--	--	--	--	<2.0	18	<1.0	--	9.0	--
	12/17/09	--	--	--	--	--	--	--	4.4	--	--	--	--
	11/16/11	--	--	--	--	--	--	<2.0	20	--	--	<b>11</b>	--
	01/05/12	--	--	--	--	--	--	--	24	--	--	<b>11</b>	--
05/24/12	--	--	--	--	--	--	--	3.4	--	--	<b>17</b>	--	
11/14/12	--	--	--	--	--	--	--	12	--	--	<b>13</b>	--	
05/22/13	--	--	--	--	--	--	--	6.6	--	--	<b>22</b>	--	
11/19/13	--	--	--	--	--	--	--	--	--	--	3.3 J	--	

**TABLE 3**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: 1993 - 2015**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)						SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dacthal	Dicamba	Dichlorprop	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>70</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>4.0</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>										<b>0.52**</b>			
M-3BA (cont.)	07/17/14	--	--	--	--	--	--	--	<200	--	--	7	--
	11/11/14	--	--	--	--	--	--	--	55	--	--	2.7	--
	05/20/15	No Well Access											
	11/10/15	No Well Access											

Notes:

- µg/L = Micrograms per liter
- mg/L = Milligrams per liter
- DEQ = Department of Environmental Quality
- DEQ-7 = Circular DEQ-7 Montana numeric water quality standard, 2012
- EPA RSL = U.S. Environmental Protection Agency Regional Screening Level for tapwater
- 2,4-D = 2,4-dichlorophenoxyacetic acid
- MCPA = 4-chloro-2 methylphenoxy acetic acid
- MCPP = 2-(4-chloro-2 methylphenoxy)-propanoic acid
- <0.5 = Not detected above specific minimum laboratory method reporting limit
- \* = DEQ-7 standard established in 2019.
- \*\* = EPA RSL (January 2015) used as groundwater standard prior to 2019.
- = Not analyzed or no data available
- d = Reporting limit increased due to sample matrix and / or result reported from a dilution
- D = Duplicate sample result
- J = Estimated Value (value is less than reporting limit)
- R = Resampled due to DEQ-7 Standard exceedance
- C = Used as a compliance well when MCPA concentrations exceeded DEQ-7 standards in point of compliance well OBS-2 on July 17, 2014.

Analytical Methods:

- Chlorinated Herbicides by EPA 8151
- Low Level Herbicides/SVOC by EPA 8270C/8270E SIM
- Arsenic by EPA 6020/200.8
- Total Phenolics by EPA E420.4
- SVOC = Semi Volatile Organic Compounds by EPA 8270 or 8270C

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
MW-1	05/03/16	0.16	33 d	<0.10	0.35	<0.10	0.23	<0.10	<0.10	1.7	<0.010
	05/03/16 D	0.88	27 d	0.29	0.45	<0.10	0.30	<0.10	<0.10	2.3	<0.010
	11/09/16	0.27	53	0.23	0.10	<0.10	0.38	<0.10	<0.10	1.5	<0.010
	05/16/17	1.8	43	0.33	<0.10	1.0	0.34	0.44	<0.12	1.6	<0.010
	11/06/17	<0.10	27	1.4	<0.10	<0.10	4.60	<0.25	<0.12	1.7	0.027
	05/22/18	<1.0	106	<0.25	<0.50	<2.0	2.3	0.34	J <5.0	1.0	<0.01
	11/05/18	18	189	19	<0.50	<b>12</b>	12	<0.40	<5.0	2	0.02
	05/19/19	2.5	550 d	10 d	<0.50	<2.0	<2.0	<0.40	<5.0	2	<0.01
	11/14/19	<1.0	84 d	0.31	<0.50	<2.0	<2.0	<0.40	<4.6	3	0.04
	08/07/20	<1.0	124 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	0.01
	11/12/20	<1.0	110 d	<0.25	<0.50	<2.0	<2.0	1.1	<4.6	2	<0.01
	11/12/20 D	<1.0	112 d	<0.25	<0.50	<2.0	<2.0	1.0	<4.6	2	<0.01
	05/05/21	<1.0	100 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.01
	11/23/21	<1.0	55 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	3	<0.01
	05/04/22	<1.0	49 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	05/04/22 D	<1.0	55 d	<0.25	<0.50	<2.0	<2.0	0.17	J <4.6	2	<0.01
	11/04/22	<1.0	68 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.01
	11/04/22 D	<1.0	65 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.01
	05/03/23	<1.0	59 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.01
	05/03/23 D	<1.0	58 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.01
11/15/23	<1.0	36 d	<0.25	<0.50	1.2	J 1.3	J <0.40	<5.0	1	0.05	
11/15/23 D	<1.0	40 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.8	1	<0.01	
05/30/24	<1.0	51 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01	
05/30/24 D	<1.0	62 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01	
11/26/24	<1.0	38 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01	
11/26/24 D	<1.0	35 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.010	
MW-2	05/03/16	0.24	6.8	<0.10	6.1	<0.10	130 d	<0.10	<0.10	2.3	0.023
	11/09/16	<0.10	7.9	<0.10	2.4	<0.10	150	<0.10	<0.10	1.8	<0.010
	05/16/17	0.62	5.2	<0.10	1.4	<0.10	93 d	0.88	<0.12	1.7	<0.010
	11/07/17	<0.10	1.3	<0.10	1.1	<0.10	14	0.56	<0.12	1.3	0.014
	05/22/18	<1.0	0.94	<0.25	0.49	J 2.5	4.6	0.54	<5.0	1.0	<0.01

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>						<b>0.52**</b>					
MW-2 (cont.)	11/06/18	<1.0	1.4	<0.25	0.88	<2.0	6.6	0.43	<5.0	1	<0.01
	05/15/19	<1.0	3.6	<0.25	0.75	<2.0	<2.0	0.49	<5.0	<1	<0.01
	11/15/19	<1.0	1.4	<0.25	<0.50	<2.0	1.2 J	0.35 J	<4.6	1	<0.01
	08/06/20 t	63 d	4.2	1.0	<0.50	<b>6.1</b>	32	0.19 J	<4.6	2	0.01
	09/11/20 R	<1.0	3.3	<0.25	<0.50	<2.0	21	<0.40	<4.6	1	0.01
	11/11/20	63 d	4.3 d	51	0.55	2.2	9.0	1.2	<4.6	1	<0.01
	05/05/21	<1.0	4.2	<0.25	<0.50	2.2	3.7	0.34 J	<4.6	<1	0.01
	11/22/21	<1.0	3.2	<0.25	<0.50	<2.0	<2.0	0.54	<4.6	1	<0.01
	05/03/22	<1.0	3.7	<0.25	<0.50	<2.0	<2.0	0.65	<4.6	<1	<0.01
	11/03/22	<1.0	3.6		<0.50	<2.0	<2.0	0.55	<4.6	1	<0.01
	05/03/23	<1.0	4.7	<0.25	<0.50	<2.0	<3.0 d	0.30 J	<4.6	1	<0.02
	11/14/23	<1.0	4.9	<0.25	<0.50	<2.0	<2.0	0.32 J	<5.0	<1	0.01
	05/29/24	<1.0	8.0 d	<0.25	<0.50	<2.0	56	0.23 J	<4.6	<1	0.01
11/25/24	<1.0	10 d	<0.25	<0.50	<2.0	<2.0	0.33 J	<4.6	<1	<0.010	
MW-3	05/03/16	0.36	16	<0.10	0.98	<0.10	4.8	<0.10	0.17	4.9	<0.010
	11/09/16	0.99	48	0.11	0.26	<0.10	12.0	<b>11.0</b>	<0.10	6.3	<0.010
	12/08/16 R	--	--	--	--	--	--	<0.10	--	--	--
	05/16/17	0.26	33	<0.10	0.12	<0.10	2.4	1.8	0.078 J	5.9	<0.010
	11/07/17	<0.10	10	<0.10	1.4	<0.10	20	1.1	0.092 J	5.1	0.022
	05/22/18	<1.0	17	<0.25	0.34 J	2.2	2.6	1.3	<5.0	6.0	<0.01
	11/05/18	<1.0	5.6	<0.25	0.96	<2.0	62	1.6	<5.0	8	0.01
	05/15/19	<1.0	138 d	<0.25	<0.50	<2.0	<2.0	2.4	<5.0	7	<0.01
	11/14/19	<1.0	64 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<b>11</b>	<0.01
	08/06/20	<1.0	61 d	<0.25	<0.50	<2.0	<2.0	1.7	<4.6	7	<0.01
	11/11/20	<1.0	61 d	<0.25	<0.50	<2.0	<2.0	4.4 d	<4.6	7	<0.01
	05/05/21	<1.0	54 d	<0.25	<0.50	<b>3.6</b>	4.3	1.0	<4.6	6	0.01
	11/22/21	<1.0	53 d	<0.25	<0.50	<2.0	<2.0	3.3	<4.6	7	<0.01
	05/03/22	<1.0	25 d	<0.25	<0.50	<2.0	<2.0	4.1	<4.6	5	0.01
	11/03/22	<1.0	40 d	<0.25	<0.50	<2.0	<2.0	0.98	<4.6	7	<0.02
05/03/23	<1.0	22 d	<0.25	<0.50	<2.0	<2.0	0.93	<4.6	6	<0.01	

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPD	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
MW-3 (cont.)	11/14/23	<1.0	27 d	<0.25	<0.50	<2.0	<2.0	1.4	<5.0	6	<0.01
	05/29/24	<1.0	21 d	<0.25	<0.50	<2.0	<2.0	1.8	<4.6	6	<0.01
	11/25/24	<1.0	19 d	<0.25	<0.50	<2.0	<2.0	1.9	4.6	6	<0.010
MW-4	05/03/16	1.2	11	1.5	0.80	<0.10	1.8	<0.10	<0.10	3.0	<0.010
	11/09/16	0.7	12	5.5	0.32	<0.10	4.3	<0.10	<0.10	2.8	<0.010
	05/16/17	0.27	15	1.6	0.14	<0.10	1.5	<0.25	<0.12	2.6	<0.010
	11/07/17	<0.10	38	1.4	0.19	<0.10	3.2	<0.25	<0.12	1.5	<0.010
	05/21/18	<1.0	41	<0.25	<0.50	<2.0	<2.0	<0.40	<5.0	1.0	<0.01
	11/05/18	<1.0	63	<0.25	<0.50	<2.0	<2.0	0.38	J <5.0	2	<0.01
	05/15/19	<1.0	140 d	<0.25	<0.50	<2.0	<2.0	<0.40	<5.0	3	<0.01
	11/14/19	<1.0	69 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	3	<0.01
	08/06/20	<1.0	74 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	3	<0.01
	11/11/20	<1.0	69 d	<0.25	<0.50	<2.0	<2.0	0.26	J <4.6	3	<0.01
	05/05/21	<1.0	51 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	4	0.01
	11/22/21	<1.0	29 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.01
	05/03/22	<1.0	18 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	3	<0.01
	11/03/22	<1.0	34 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	3	0.01
	05/03/23	<1.0	19 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	4	<0.01
11/14/23	<1.0	25 d	<0.25	<0.50	<2.0	<2.0	<0.40	<5.0	2	<0.01	
05/29/24	<1.0	35 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	10	<0.01	
11/25/24	<1.0	25 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.010	
M-5	05/24/16	4.8	6.9 d	39 d	0.79	0.50	0.33	<0.10	<0.10	<b>22</b>	<0.010
	11/09/16	0.3	3.8	36	0.29	<0.10	0.45	<0.10	<0.10	1.8	<0.010
	05/16/17	3.2	3.4	5.0	0.18	0.74	0.21	<0.25	<0.12	4.5	<0.010
	11/06/17	<0.10	2.5	9.1	0.14	<0.10	0.19	<0.25	<0.12	7.6	0.020
	05/21/18	0.73 J	4.3	1.7	<0.50	<2.0	<2.0	<0.40	<5.0	1.0	<0.01
	05/21/18	0.99 J	5.4	2.0	<0.50	<2.0	<2.0	<0.40	<5.0	1.0	<0.01
	11/06/18	<1.0	18	1.1	<0.50	<2.0	3.3	<0.40	<5.0	6	<0.01
	05/15/19	<1.0	7.2	0.99	<0.50	<b>3.5</b>	3.4	<0.40	<5.2	2	<0.01
11/14/19	<1.0	4.4	1.5	<0.50	<2.0	<2.0	<0.40	<4.6	<b>11</b>	<0.01	

Destroyed August 2020

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
MW-5R	08/07/20	<1.0	5.1	2.3	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	11/12/20	<1.0	4.8	0.43	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	05/06/21	<1.0	4.2	0.43	<0.50	1.9 J	1.7 J	<0.40	<4.6	<1	<0.01
	11/23/21	<1.0	5.0	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	05/04/22	<1.0	3.1	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	11/03/22	<1.0	2.3	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.01
	05/02/23	<1.0	1.7	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	11/14/23	<1.0	3.1	<0.25	<0.50	<2.0	<2.0	<0.40	<5.0	<1	<0.01
	05/30/24	<1.0	2.4	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
11/26/24	<1.0	2.6	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.010	
M-7	02/10/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	--
	08/10/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	<5.0	--
	11/15/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	--
	02/02/94	--	--	--	--	--	--	--	--	--	<0.01
	05/10/94	--	--	--	--	--	--	--	--	--	<0.01
	02/08/95	--	--	--	--	--	--	--	--	--	<0.01
	08/16/95	--	--	--	--	--	--	--	--	--	<0.03
	11/08/95	--	--	--	--	--	--	--	--	--	<0.01
	12/19/95	2.36	--	4.2	--	<363	<455	<10	<10	--	--
	11/05/97	--	--	--	--	--	--	--	--	--	<0.01
	05/06/98	--	--	--	--	--	--	--	--	--	<0.01
	11/04/98	--	--	--	--	--	--	--	--	--	<0.01
	05/04/99	--	--	--	--	--	--	--	--	--	<0.01
	11/17/99	--	--	--	--	--	--	--	--	--	<0.01
	06/12/00	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	--
	11/17/00	--	--	--	--	--	--	--	--	--	<0.01
	05/30/01	--	--	--	--	--	--	--	--	--	<0.01
	11/02/01	--	--	--	--	--	--	--	--	--	<0.01
	01/09/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	04/10/03	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	--	<0.01
07/29/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01	

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
M-7 (cont.)	10/08/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	06/23/04	--	--	--	--	--	--	--	--	--	<0.01
	11/18/04	--	--	--	--	--	--	--	--	--	<0.01
	05/26/05	--	--	--	--	--	--	--	--	--	<0.01
	11/17/05	--	--	--	--	--	--	--	--	--	<0.01
	05/22/06	--	--	--	--	--	--	--	--	--	<0.01
	12/04/06	--	--	--	--	--	--	--	--	--	<0.01
	05/30/07	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	<0.01
	11/12/07	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	<0.01
	03/18/08	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	05/29/08	--	--	--	--	<b>3.3</b>	<2.0	<1.0	--	<5.0	<0.01
	08/19/08	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	11/11/08	--	--	--	--	--	--	--	--	--	<0.01
	05/27/09	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/17/09	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/25/10	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/16/10	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/25/11	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/15/11	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/24/12	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/14/12	--	--	--	--	--	--	--	--	<5.0	<0.01
	05/22/13	--	--	--	--	--	--	--	--	<5.0	<0.01
	11/19/13	--	--	--	--	--	--	--	--	<5.0	<0.01
07/17/14	--	--	--	--	--	--	--	--	<5.0	<0.01	
11/11/14	--	--	--	--	--	--	--	--	0.46	<0.010	
05/20/15	--	--	--	--	--	--	--	--	0.77	J <0.010	
11/10/15	--	--	--	--	--	--	--	--	0.56	J <0.010	
05/03/16	<0.10	0.45	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.73	J <0.010
11/09/16	<0.10	0.65	0.52	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.53	J <0.010
05/16/17	2.8	0.45	0.46	<0.10	<0.10	<0.10	<0.10	<0.25	<0.12	<1.0	<0.010
11/06/17	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.12	<1.0	<0.010

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
M-7 (cont.)	05/21/18	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<5.0	<1.0	<0.01
	11/06/18	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<5.0	<1	<0.01
	05/17/19	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<5.2	<1	<0.01
	11/15/19	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	08/07/20	<1.0	0.29	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	11/12/20	<1.0	<0.25	<0.25	<0.50	2.8	3.2	<0.40	<4.6	<1	<0.01
	05/05/21	<1.0	0.75	<0.25	<0.50	1.8	2.1	<0.40	<4.6	<1	<0.01
	11/22/21	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	05/03/22	<1.0	0.97	<0.25	<0.50	2.9	3.6	<0.40	<4.6	<1	<0.01
	11/03/22	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	05/03/23	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	11/14/23	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<4.8	<1	<0.01
05/29/24	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01	
11/26/24	<1.0	<0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.010	
M-12	02/11/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	0.17
	08/10/93	<1.0	--	<0.25	<0.5	<250	<250	<10	<10	<5.0	0.03
	11/16/93	7.0	--	0.54	<0.5	<250	<250	--	--	--	--
	02/03/94	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	0.11
	05/11/94	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	0.09
	08/31/94	<1.0	--	<0.25	<0.5	<200	<200	--	--	6.0	0.04
	11/01/94	<1.0	--	<0.25	<0.5	<200	47	--	--	--	--
	02/09/95	1.6	--	0.66	<0.5	<200	93	--	--	--	<0.01
	02/14/95	--	--	--	--	--	--	--	--	--	--
	08/16/95	3.3	--	0.46	<0.5	<200	<200	--	--	--	0.04
	11/08/95	0.63	--	0.044	<0.5	<200	150	--	--	<5.0	0.02
	12/20/95	<2.0	--	<0.72	--	<363	<455	<13	<13	--	--
	05/29/96	0.25	--	<0.25	<0.5	<200	71	--	--	--	--
	11/12/96	0.018	--	0.062	<0.5	<200	<200	--	--	--	--
	05/13/97	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	<0.01
	11/05/97	1.4	--	<0.25	<0.5	<200	<200	--	--	--	<0.01
05/06/98	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01	

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
M-12 (cont.)	11/04/98	<1.0	--	<0.25	<0.5	<200	<200	--	<10	9.0	<0.01
	05/04/99	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	0.03
	11/17/99	<1.0	--	<0.25	<0.5	<200	<200	--	<10	<5.0	0.02
	06/08/00	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	--
	11/16/00	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	7.0	<0.01
	05/30/01	--	--	--	--	--	--	<10	<10	--	<0.01
	11/02/01	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	<5.0	<0.01
	01/07/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	04/08/03	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	--	<0.01
	07/28/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	10/08/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	11/13/03	--	--	--	--	--	--	--	--	<5.0	--
	06/23/04	--	--	--	--	--	--	--	--	--	<0.01
	11/18/04	--	--	--	--	--	--	--	--	--	<0.01
	05/26/05	--	--	--	--	--	--	--	--	--	<0.01
	11/17/05	<1.0	0.45	<0.25	<0.5	<2.0	38	<1.0	<10	<5.0	<0.01
	05/22/06	<1.0	1.8	<0.25	<0.5	<2.0	7.8	<1.0	<10	<b>36</b>	<0.01
	07/19/06	--	--	--	--	--	8.7	--	--	--	--
	12/04/06	<1.0	1.8	<0.25	<0.5	<2.0	11	<1.0	<10	<5.0	<0.01
	05/30/07	0.2	1.6	0.095	<0.5	<2.0	<2.0	<1.1	<11	<b>11</b>	<0.01
	11/12/07	<1.0	1.4	<0.25	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	03/18/08	--	--	--	--	<2.0	2.2	<1.0	--	7.0	--
	05/29/08	<1.0	3.7	<0.25	<0.5	<2.0	6.9	<1.0	<10	<b>15</b>	<0.01
	08/19/08	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	11/11/08	<1.0	0.27	<0.25	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	<1.0	1.3	<0.25	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/17/09	<1.0	0.55	<0.25	<0.5	<2.0	<2.0	<1.0	<5.0	<b>11</b>	<0.01
	05/25/10	<1.0	0.57	<0.25	<0.5	<2.0	<2.0	<1.0	<5.0	<b>11</b>	<0.01
	11/16/10	<1.0	0.72	0.27	<0.5	<2.0	<2.0	<1.0	<5.0	<b>15</b>	<0.01
	05/25/11	<1.0	4.0	0.29	<0.5	<2.0	61	<1.0	<5.0	<5.0	<0.01
	11/16/11	<1.0	<1.0	<0.25	<0.5	<2.0	<2.0	<1.0	<5.0	<b>15</b>	<0.01

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
M-12 (cont.)	05/24/12	<1.0	4.1	<0.25	0.48	<2.0	21	<1.0	<5.0	7.0	0.02
	11/14/12 <i>i</i>	<1.0	3.6	0.36	<0.5	<2.0	<2.0	0.16	<10	<b>12</b>	<0.01
	05/22/13 <i>i</i>	<1.0	3.4	<0.25	<0.50	1.0 <i>J</i>	4.5	0.17 <i>J</i>	<5.0	<b>13</b>	<0.01
	11/19/13 <i>i</i>	<1.0	1.4	<0.25	<0.50	<2.0	<200	<0.40	<5.0	3.3 <i>J</i>	<0.01
	07/17/14 <i>i</i>	<1.0	3.8	<0.25	<0.50	<2.0	<200	<0.40	<5.0	7	<0.01
	11/11/14 <i>i</i>	<0.20	0.98	<0.20	<0.20	<0.20	64	0.38	<0.25	2.3	<0.010
	05/20/15 <i>i</i>	<0.20	10	<0.20	6.0	<0.20	210 <i>d</i>	<0.25	<0.25	6.2	<0.010
	11/10/15 <i>i</i>	0.11	3.9	0.34	8.6	<0.10	110 <i>d</i>	<0.25	<0.25	5.1	<0.010
	05/03/16 <i>i</i>	0.31	5.5	<0.10	10	<0.10	120 <i>d</i>	<0.10	<0.10	4.1	0.015
	11/09/16 <i>i</i>	<0.10	3.3	<0.10	1.4	<0.10	93	<0.10	<0.10	6.4	<0.010
	05/16/17	0.72	3.3	0.14	1.6	<0.10	79 <i>d</i>	0.22 <i>J</i>	<0.12	3.1	<0.010
	11/07/17	<0.10	0.52	<0.10	0.93	<0.10	4.4	<0.25	<0.12	4.9	<0.010
	05/21/18	<1.0	0.64	<0.25	0.47 <i>J</i>	<2.0	2.5	<0.40	<5.0	4.0	<0.01
	11/06/18	<1.0	2.5	<0.25	0.52	<2.0	<2.0	<0.40	<5.0	3	<0.01
	05/17/19	<1.0	3.2	<0.25	0.52	<2.0	7.7	<0.40	<5.2	<b>11</b>	<0.01
	11/15/19	<1.0	1.5	<0.25	<0.50	<2.0	6.1	<0.40	<4.6	5	<0.01
	08/07/20	<1.0	3.6	<0.25	<0.50	<2.0	6.8	<0.40	<4.6	5	<0.01
	11/11/20	6.7	6.7	6.4	<0.50	<2.0	37	1.4	<4.6	4	<0.01
	05/06/21	<1.0	5.5	<0.25	<0.50	<2.0	49	0.15 <i>J</i>	<4.6	4	<0.01
	11/23/21	<1.0	4.9	<0.25	<0.50	<2.0	7.0	<0.40	<4.6	4	<0.01
	05/03/22	<1.0	3.7	<0.25	<0.50	1.6 <i>J</i>	3.9	0.16 <i>J</i>	<4.6	4	<0.01
	11/03/22	<1.0	5.2	<0.25	<0.50	<2.0	5.9	0.23 <i>J</i>	<4.6	6	<0.01
	05/03/23	<1.0	4.4	<0.25	<0.50	<2.0	54	0.20 <i>J</i>	<4.6	4	<0.01
	11/14/23	<1.0	6.6	<0.25	<0.50	1.6 <i>J</i>	11	0.12 <i>J</i>	<4.8	5	<0.01
	05/30/24	<1.0	8.4	<0.25	<0.50	<2.0	94	<0.40	<4.6	2	<0.01
	11/25/24	<1.0	11	<0.25	<0.50	<2.0	22	0.22 <i>J</i>	<4.6	3	<0.010

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
M-14	05/03/16	2.1	1.4	<0.10	3.9	<0.10	0.37	<0.10	<0.10	1.6	<0.010
	11/09/16	0.27	2.8	<0.10	0.44	<0.10	1.2	<0.10	<0.10	2.5	0.014
	05/16/17	1.1	13	0.90	0.41	<0.10	<0.10	<0.25	0.1 J	1.9	<0.010
	11/07/17	1.3	0.37	0.41	0.63	0.12	0.32	<0.25	<0.12	1.4	0.017
	05/21/18	<3.0	78	93	<0.50	<2.0	5.1	<0.40	<5.0	4.0	<0.01
	11/06/18	<1.0	26	0.36	0.55	<2.0	<2.0	<0.40	<5.0	4	<0.01
	05/17/19	1.2	8.6	1.8	<0.50	<2.0	<2.0	<0.40	<5.4	5	<0.01
	11/15/19	<1.0	1.8	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	4	<0.01
	08/06/20 t	<1.0	5.7	0.35	<0.50	<2.0	<2.0	<0.40	<4.6	2	0.010
	11/11/20	<1.0	2.4	<0.25	0.59	<2.0	<2.0	<0.40	<4.6	1	0.03
	05/05/21	<1.0	1.8	<0.25	0.57	<2.0	0.78 J	<0.40	<4.6	1	<0.01
	11/22/21	<1.0	1.4	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	05/03/22	<1.0	1.5	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1	<0.01
	11/03/22	<1.0	1.0	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	05/02/23	<1.0	1.2	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
11/14/23	<1.0	0.98	<0.25	<0.50	<2.0	<2.0	<0.40	<4.8	1	<0.01	
05/29/24	<1.0	1.2	0.43	<0.50	<2.0	<2.0	0.96	<4.6	<1	<0.01	
11/25/24	<1.0	0.38	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.010	
M-16	12/31/92	67	--	3.3	--	<250	<250	--	--	--	--
	01/20/93	3.1	--	0.87	--	<250	<250	--	--	--	--
	02/11/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	--
	02/02/94	--	--	--	--	--	--	--	--	--	<0.01
	05/10/94	--	--	--	--	--	--	--	--	--	<0.01
	12/20/95	7.89	--	2.26	--	<363	<455	<10	<10	--	--
	01/08/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	04/09/03	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	--	<0.01
	07/29/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	10/09/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	11/17/05	<1.0	3.5	0.22	1.8	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/22/06	<1.0	11	<0.25	<0.5	<2.0	6.6	<1.0	<10	<5.0	<0.01
	11/29/06	0.45	20	<0.25	<0.5	<2.0	7.3	<1.0	<10	<5.0	<0.01

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
M-16 (cont.)	05/30/07	0.28	24	<0.25	<0.5	<2.0	32	<1.0	<10	<5.0	<0.01
	07/03/07	--	--	--	--	--	27	--	--	--	--
	11/13/07	<1.0	22	<0.25	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/28/08	<1.0	38	<0.25	<0.5	<2.0	19	<1.0	<10	<5.0	<0.01
	06/25/08	--	--	--	--	<2.0	17	<1.0	--	<5.0	--
	11/11/08	<1.0	43	0.43	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	<1.0	27	<0.25	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/25/10	<1.0	29	<0.25	<0.5	<2.0	6.9	<1.0	<5.0	<5.0	<0.01
	11/16/10	<1.0	30	0.95	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	05/25/11	<1.0	14	1.2	<0.5	<2.0	1.4	<1.0	<5.0	<5.0	<0.01
	11/16/11	<1.0	14	<0.25	<0.5	<2.0	20	<1.0	<5.0	<5.0	<0.01
	05/24/12	<1.0	13	<0.25	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/14/12	<1.0	3.8	<0.25	<0.5	<2.0	<2.0	<0.4	<10	<5.0	<0.01
	05/22/13	<1.0	7.7	<0.25	<0.50	<2.0	<2.0	<0.40	<5.0	<5.0	<0.01
	11/19/13	<1.0	7.1	<0.25	<0.50	<2.0	<200	<0.40	<5.0	1.5 J	<0.01
	07/17/14	<1.0	3.7	<0.25	<0.50	<2.0	<200	<0.40	<5.0	<5.0	<0.01
	11/11/14	0.57	1.6	<0.20	<0.20	<0.20	0.33	0.39	<0.25	1.3	<0.010
	05/20/15	<0.20	6.6	<0.20	<0.20	<0.20	0.39	<0.25	<0.25	1.3	<0.010
	11/10/15	<0.10	9.1	<0.11	0.97	0.72	1.9	<0.25	<0.25	1.7	<0.010
	05/24/16	0.30	3.6	<0.10	0.34	<0.10	0.11	<0.10	<0.10	1.4	<0.010
11/09/16	<0.10	7.5	<0.10	0.24	<0.10	0.68	<0.10	<0.10	1.4	<0.010	
11/09/16 D	<0.10	6.8	0.21	0.21	<0.10	0.65	<0.10	<0.10	1.2	<0.010	
05/16/17	0.20	3.8	<0.10	0.15	0.10	0.41	<0.25	<0.12	1.3	<0.010	
05/16/17 D	<0.10	3.8	<0.10	0.15	<0.10	1.7	0.24 J	<0.12	1.4	<0.010	
11/06/17	<0.10	5.6	<0.10	0.21	<0.10	97	<0.25	<0.12	1.3	<0.010	
11/06/17 D	<0.10	6.9	1.9	0.27	<0.10	110	<0.25	<0.12	1.4	<0.010	
05/21/18	<1.0	13	<0.25	<0.50	<2.0	76	0.29 J	<5.0	1.0	<0.01	
11/05/18	<1.0	36	<0.25	<0.50	<2.0	14	<0.40	<5.0	1	<0.01	
11/05/18 D	<1.0	36	<0.25	<0.50	<2.0	21	<0.40	<5.0	1	<0.01	

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
M-16 (cont.)	05/15/19	<1.0	17	<0.25	<0.50	<2.0	<2.0	<0.40	<5.3	1	<0.01
	05/15/19 D	<1.0	16	<0.25	<0.50	<2.0	<2.0	<0.40	<5.0	1	<0.01
	11/14/19	<1.0	19 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.01
	11/14/19 D	<1.0	19 d	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	2	<0.01
	08/07/20	<1.0	10	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	11/12/20	<1.0	7.9	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	05/06/21	<1.0	5.7	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	05/06/21 D	<1.0	5.6	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	11/23/21	<1.0	16	<0.25	<0.50	<2.0	5.5	<0.40	<4.6	2	<0.01
	11/23/21 D	<1.0	17	<0.25	<0.50	<2.0	4.9	<0.40	<4.6	2	<0.01
	05/04/22	<1.0	4.1	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	11/03/22	<1.0	11	<0.25	<0.50	<2.0	5.8	<0.40	<4.6	2	<0.01
	05/02/23	<1.0	3.0	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1	<0.01
	11/14/23	<1.0	8.4	<0.25	<0.50	<2.0	24	<0.40	<4.8	1	0.01
05/30/24	<1.0	4.6	<0.25	<0.50	<2.0	<2.0	1.3	<4.6	1	<0.01	
11/26/24	<1.0	6.2	<0.25	<0.50	<2.0	3.6	0.40 J	<4.6	2	<0.010	
OBS-1	05/20/15	--	--	--	--	--	110 d	--	--	9.7	--
	11/10/15	0.32	25	<0.10	13	<0.10	110 d	--	--	<b>13</b>	--
	05/03/16	0.17	21	<0.10	3.6	<0.10	57 d	<0.10	<0.10	<b>11</b>	--
	11/09/16	1.3	34	0.22	2.1	<0.10	97	3.6	<0.10	<b>13</b>	0.010
	12/08/16 R	--	--	--	--	--	--	<0.10	--	--	--
	05/16/17 i	0.36	17	<0.10	0.42	<b>44</b>	76 d	2.5	<0.12	<b>11</b>	0.012
	11/07/17 i	<0.10	3.0	<0.10	1.8	<0.10	250	2.2	<0.12	<b>12</b>	0.015
	05/22/18 i	<1.0	4.1	<0.25	2.3	<2.0	12	2.5	<5.0	<b>12</b>	0.01
	11/06/18 i	<1.0	6.3	0.22 J	1.0	<2.0	<b>324</b>	1.5	<5.0	<b>12</b>	0.05
	05/15/19 i	<1.0	8.6	<0.25	0.84	<2.0	<2.0	1.8	<5.0	<b>11</b>	0.04
	11/14/19 i	<1.0	3.0	<0.25	<0.50	<2.0	4.8	2.0	<4.6	9	0.05
	08/07/20 i	<1.0	8.8	<0.25	<0.50	<2.0	9.7	2.4	<4.6	10	0.02
	11/11/20	<1.0	8.4	<0.25	<0.50	<2.0	8.3	3.3 d	<4.6	<b>12</b>	0.04
	05/06/21	<1.0	8.8	<0.25	<0.50	<2.0	5.2	1.1	<4.6	<b>11</b>	0.02

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
OBS-1 (cont.)	11/23/21	<1.0	4.0	<0.25	<0.50	<2.0	24	2.7	<4.6	<b>11</b>	0.04
	05/03/22	<1.0	2.6	<0.25	<0.50	<2.0	<2.0	1.9	<4.6	10	0.02
	11/03/22	<1.0	2.6	<0.25	<0.50	<2.0	9.0	1.7	<4.6	<b>11</b>	0.01
	05/02/23	<1.0	3.5	<0.25	<0.50	<2.0	12	1.1	<4.6	8	0.02
	11/14/23	<1.0	2.9	<0.25	<0.50	<2.0	52	1.3	<4.8	9	0.04
	05/30/24	<1.0	2.9	<0.25	<0.50	<2.0	32	1.1	<4.6	7	<0.01
	11/26/24	<1.0	3.1	<0.25	<0.50	<2.0	17	1.6	<4.6	7	<0.010
OBS-2	02/11/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	<0.01
	08/11/93	<1.0	--	<0.25	<0.5	<250	<250	<10	<10	<b>60</b>	<0.01
	11/16/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	--
	02/03/94	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	<0.01
	05/11/94	<1.0	--	<0.25	<0.5	<250	<250	--	--	--	<0.01
	08/31/94	<1.0	--	<0.25	<0.5	<250	<250	--	--	<b>64</b>	<0.01
	11/02/94	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	--
	02/08/95	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	<0.01
	02/14/95	--	--	--	--	--	--	--	--	--	--
	08/16/95	0.81	--	0.087	<0.5	<200	<200	--	--	--	0.03
	11/08/95	0.27	--	<0.25	<0.5	<200	42	--	--	<b>88</b>	0.04
	12/20/95	<2.0	--	<0.72	--	<363	<455	<12	<12	--	--
	05/29/96	0.12	--	<0.25	<0.5	<200	<200	--	--	--	--
	11/12/96	0.39	--	<0.25	<0.5	<200	<200	--	--	--	--
	05/13/97	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	0.02
	05/19/97	--	--	--	--	--	--	--	--	--	--
	11/05/97	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	<0.01
	05/06/98	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	0.02
	11/04/98	<1.0	--	<0.25	<0.5	<200	<200	--	<10	<b>82</b>	<0.01
	05/04/99	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	0.03
11/17/99	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01	
06/08/00	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	--	

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
OBS-2	11/16/00	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	<b>164</b>	<0.01
(cont.)	05/30/01	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	<0.01
	05/31/01	--	--	--	--	--	--	<10	<10	--	--
	11/02/01	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	<b>37</b>	<0.01
	01/07/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	04/08/03	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	--	<0.01
	07/28/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	10/08/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	11/13/03	--	--	--	--	--	--	--	--	<b>40</b>	--
	06/23/04	--	--	--	--	--	--	--	--	--	<0.01
	11/18/04	--	--	--	--	--	--	--	--	--	0.02
	05/26/05	<1.0	--	<0.25	<0.5	<2.0	43	<1.0	<10	<b>118</b>	<0.01
	11/17/05	<1.0	28	0.39	<0.5	<2.0	60	<1.0	<10	<b>215</b>	<0.01
	05/22/06	0.79	42	<0.25	<0.5	<2.0	55	<1.0	<10	<b>101</b>	<0.01
	07/19/06	--	--	--	--	--	64	--	--	--	--
	12/04/06	<1.0	23	<0.25	<0.5	<2.0	12	<1.0	<10	<b>73</b>	<0.01
	05/30/07	0.56	36	0.26	<0.5	<2.0	140	<1.1	<11	<b>87</b>	<0.01
	07/03/07	--	--	--	--	--	86	--	--	--	--
	11/12/07	<1.0	45	<0.25	<0.5	<2.0	91	<1.0	<10	<b>167</b>	<0.01
	03/18/08	--	--	--	--	<2.0	27	<1.0	--	<b>293</b>	--
	05/29/08	<1.0	36	<0.25	<0.5	<2.0	70	<1.0	<10	<b>255</b>	<0.01
	08/19/08	--	--	--	--	<2.0	74	<1.0	--	<b>209</b>	--
	11/11/08	<1.0	32	<0.25	<0.5	<2.0	160	<1.0	<10	<b>238</b>	<0.01
	05/27/09	<1.0	28	<0.25	<0.5	<2.0	94	<1.0	<5.0	<b>118</b>	0.14
	11/17/09	<1.0	28	<0.25	<0.5	<2.0	101	<1.0	<b>5.1</b>	<b>199</b>	<0.01
	05/25/10 <i>i</i>	<1.0	28	0.46	<0.5	<2.0	10	<1.0	<5.0	<b>227</b>	0.02
	11/16/10 <i>i</i>	<1.0	41	0.80	<0.5	<2.0	38	<1.0	--	<b>48</b>	<0.01
	05/25/11 <i>i</i>	<1.0	45	0.29	<0.5	<2.0	114	<1.0	<5.0	<b>61</b>	0.02
	11/16/11 <i>i</i>	<1.0	46	<0.25	<0.5	<2.0	67	<1.0	<5.0	<b>22</b>	<0.01

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
OBS-2 (cont.)	01/05/12 <i>i</i>	--	--	--	--	--	25	--	--	<b>22</b>	--
	05/24/12 <i>i</i>	<1.0	32	<0.25	<0.5	<2.0	38	1.1	<5.0	<b>175</b>	0.02
	11/14/12	<1.0	27	<0.25	<0.5	<2.0	3.8	<0.4	<10	<b>18</b>	<0.01
	05/22/13	<1.0	28	<0.25	<0.50	<2.0	4.4	1.0	<5.0	<b>13</b>	<0.01
	11/19/13	<1.0	42	<0.25	<0.50	<2.0	<200	<0.40	<5.0	<b>19</b>	0.017
	07/17/14	<1.0	35	<0.25	<0.50	<b>104</b>	<200	<0.40	<5.0	<b>95</b>	<0.01
	08/13/14 <i>R</i>	--	--	--	--	<2.0	--	--	--	--	--
	11/11/14	<0.20	7	<0.20	<0.20	<0.20	14	1.1	<0.25	<b>46</b>	<0.010
	05/20/15	<0.20	61 <i>d</i>	<0.20	<0.20	<0.20	37 <i>d</i>	<0.25	<0.25	<b>50</b>	<0.010
	11/10/15	<0.10	49 <i>d</i>	<0.10	4.2	<0.10	34 <i>d</i>	<0.25	<0.25	<b>23</b>	<0.010
	05/03/16	0.44	32 <i>d</i>	<0.10	1.6	<0.10	15	<0.10	<0.10	<b>30</b>	<0.010
	11/09/16	0.91	27	0.15	0.24	<0.10	19	3.6	<0.10	<b>32</b>	<0.010
	12/08/16 <i>R</i>	--	--	--	--	--	--	<0.10	--	--	--
	05/22/17	2.0	31	0.36	<0.10	<0.10	25	0.66	<0.12	<b>33</b>	<0.010
	11/07/17	<0.10	11	<0.10	1.3	<0.10	3.6	0.52	<0.12	8.9	<0.010
	05/22/18	<1.0	20	<0.25	0.25 <i>J</i>	<2.0	13	0.33 <i>J</i>	<5.0	<b>25</b>	<0.01
	11/06/18	<1.0	7.2	<0.25	1.4	<2.0	22	0.84	<5.0	7	0.01
	05/15/19	<1.0	112 <i>d</i>	<0.25	<0.50	<2.0	<2.0	0.49	<5.0	5	<0.01
	11/15/19	<1.0	57 <i>d</i>	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<b>14</b>	<0.01
	08/07/20	<1.0	66 <i>d</i>	<0.25	<0.50	<2.0	2.1	0.40	<4.6	4	<0.01
	08/07/20 <i>D</i>	<1.0	60 <i>d</i>	<0.25	<0.50	<2.0	<2.0	0.43	<4.6	4	<0.01
	11/12/20	<1.0	61 <i>d</i>	<0.25	<0.50	<2.0	2.7	1.9	<4.6	3	<0.01
	05/06/21	<1.0	62 <i>d</i>	<0.25	<0.50	<2.0	2.8	0.28 <i>J</i>	<4.6	3	0.01
	11/23/21	<1.0	46 <i>d</i>	<0.25	<0.50	<2.0	<2.0	1.1	<4.6	5	<0.01
	05/04/22	<1.0	28 <i>d</i>	<0.25	<0.50	<2.0	<2.0	1.0	<4.6	4	<0.01
	11/04/22	<1.0	33 <i>d</i>	<0.25	<0.50	<2.0	<2.0	0.25 <i>J</i>	<4.6	6	<0.02
	05/02/23	<1.0	28 <i>d</i>	<0.25	<0.50	<2.0	<2.0	0.26 <i>J</i>	<4.6	3	<0.01
	11/14/23	<1.0	41 <i>d</i>	<0.25	<0.50	<2.0	2.9	0.60	<4.8	3	<0.01
	05/30/24	<1.0	47 <i>d</i>	<0.25	<0.50	<2.0	2.5	0.24 <i>J</i>	<4.6	3	<0.01
	11/26/24	<1.0	37 <i>d</i>	<0.25	<0.50	<2.0	<2.0	0.60	<4.6	3	<0.010

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
OBS-11	12/21/95	<2.0	--	<0.72	--	<363	<455	--	--	--	--
	01/08/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	04/09/03	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	--	<0.01
	07/28/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	10/09/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	11/17/05	<1.0	1.3	<0.25	<0.5	<2.0	<2.0	<1.0	<10	<b>15</b>	<0.01
	05/22/06	<1.0	2.7	<0.25	<0.5	<2.0	2.4	<1.0	<10	<b>18</b>	<0.01
	12/04/06	<1.0	3.6	<0.25	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/30/07	<1.0	3.6	0.23	<0.5	<2.0	<2.0	<1.2	<12	<b>12</b>	<0.01
	11/12/07	<1.0	5.0	<0.25	<0.5	<2.0	<2.0	1.1	<10	<b>26</b>	<0.01
	03/18/08	--	--	--	--	<2.0	<2.0	<1.0	--	8.0	--
	05/29/08	<1.0	11	<0.25	<0.5	<2.0	<2.0	<1.0	<10	8.0	<0.01
	07/22/08	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	08/19/08	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	09/17/08	--	--	--	--	--	--	<1.0	--	<5.0	--
	10/14/08	--	--	--	--	<2.0	<2.0	<1.0	--	<5.0	--
	11/11/08	<1.0	7.8	<0.25	<0.5	<2.0	<2.0	<1.0	<10	<5.0	<0.01
	05/27/09	<1.0	31	<0.25	<0.5	<2.0	<2.0	<1.0	<5.0	<5.0	<0.01
	11/17/09	<1.0	25	<0.25	<0.5	<2.0	<2.0	<1.0	<5.0	<b>15</b>	<0.01
	05/25/10	<1.0	48	<0.25	<0.5	<2.0	<2.0	<1.0	<5.0	6.0	<0.01
	11/16/10	<1.0	45	1.3	<0.5	<2.0	<2.0	<1.0	<5.0	<b>32</b>	<0.01
	05/25/11	<1.0	42	0.66	<0.5	<2.0	<2.0	<1.0	<5.0	<b>42</b>	<0.01
	11/16/11	<1.0	23	0.96	<0.5	<2.0	<2.0	<1.0	<5.0	<b>20</b>	<0.01
05/24/12	<1.0	16	0.3	<0.5	<2.0	<2.0	<1.0	<5.0	<b>16</b>	<0.01	
11/14/12	5.0	9.0	0.26	<0.5	<2.0	<2.0	<0.4	<10	<5.0	<0.01	
05/22/13	<1.0	10	<0.50	<0.50	<2.0	4.2	<0.40	<5.0	6.0	<0.01	
11/19/13	<1.0	4.0	<0.25	<0.50	<2.0	<200	<0.40	<5.0	1.3	J	
07/17/14	<1.0	6.0	<0.25	<0.50	<2.0	<200	<0.40	<5.0	<5.0	<0.01	
11/11/14	<0.20	2.4	<0.20	<0.20	<0.20	0.44	0.79	<0.25	1.1	<0.010	
05/20/15	<0.20	29	d	0.47	<0.20	<0.20	3.3	<0.25	1.1	<0.010	

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
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 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)		
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate				
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>		
<b>EPA RSL</b>								<b>0.52**</b>					
OBS-11 (cont.)	11/10/15	<0.10	16	5.8	1.7	<0.10	1.6	<0.25	<0.25	0.99	J	<0.010	
	05/03/16	<0.10	18	2.4	0.60	<0.10	1.6	<0.10	<0.10	1.4		<0.010	
	11/09/16	<0.10	7.1	24	<0.10	<0.10	0.61	<0.10	<0.10	0.96	J	<0.010	
	05/22/17	6.1	10	7.1	<0.10	0.18	0.89	<0.25	<0.12	<1.0		<0.010	
	11/06/17	<0.10	3.7	130	1.2	<0.10	2.2	<0.25	<0.12	1.0		<0.010	
	05/22/18	<1.0	2.2	<0.25	<0.50	<2.0	<2.0	<0.40	<5.0	<1.0		<0.01	
	11/05/18	<1.0	6.1	0.56	1.4	<2.0	3.8	<0.40	<5.0	2		<0.01	
	05/17/19	<1.0	4.5	68	d	<0.50	<2.0	<2.0	<0.40	<5.0	2		<0.01
	11/15/19	<1.0	0.47	15	d	<0.50	<2.0	<2.0	<0.40	<4.6	3		<0.01
	08/07/20	<1.0	4.4	3.6		<0.50	<2.0	<2.0	<0.40	<4.6	1		<0.01
	11/12/20	<1.0	2.1	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1		<0.01	
	05/06/21	<1.0	3.7	2.1	<0.50	<2.0	1.0	J	<0.40	<4.6	1		<0.01
	11/23/21	<1.0	0.26	0.65	<0.50	<2.0	<2.0	<0.40	<4.6	1		<0.01	
	05/04/22	<1.0	1.4	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1		<0.01	
	11/04/22	<1.0	0.28	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	1		<0.01	
	05/03/23	<1.0	2.4	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1		<0.01	
11/14/23	<1.0	0.31	<0.25	<0.50	<2.0	<2.0	<0.40	<4.8	<1		<0.01		
05/30/24	<1.0	3.0	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1		<0.01		
11/26/24	<1.0	0.25	<0.25	<0.50	<2.0	<2.0	<0.40	<4.6	<1		<0.010		
<b>OFFSITE CONTINGENCY WELLS</b>													
M-17	11/03/22	<1.0	33	<0.25	<0.50	<2	<2	0.74	<4.6	2		0.02	
	11/13/23	<1.0	27	<0.25	<0.50	<2.0	<2.0	0.50	<4.8	2		<0.01	
M-3B	11/04/22	<1.0		<0.25	<0.50	<2	<2	0.36	J	<4.6	10	<0.01	
	11/13/23	<1.0	7.9	<0.25	<0.50	<2.0	3.9	0.60		<4.8	7	<0.01	
M-3BA	02/10/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	--		--	
	08/10/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	--		--	
	11/15/93	<1.0	--	<0.25	<0.5	<250	<250	--	--	--		--	
	02/02/94	<1.0	--	<0.25	<0.5	<250	<250	--	--	--		--	
	05/10/94	<1.0	--	<0.25	<0.5	<250	<250	--	--	--		--	
	12/21/95	<2.0	--	<0.72	--	<363	<455	--	--	--		--	

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
M-3BA (cont.)	05/13/97	--	--	--	--	--	--	--	--	--	<0.1
	11/05/97	--	--	--	--	--	--	--	--	--	<0.01
	05/06/98	--	--	--	--	--	--	--	--	--	0.02
	11/04/98	--	--	--	--	--	--	--	--	--	<0.01
	05/04/99	--	--	--	--	--	--	--	--	--	0.02
	11/17/99	--	--	--	--	--	--	--	--	--	0.02
	06/07/00	<1.0	--	<0.25	<0.5	<200	<200	--	--	--	--
	11/17/00	--	--	--	--	--	--	--	--	--	<0.01
	05/30/01	--	--	--	--	--	--	--	--	--	<0.01
	11/02/01	--	--	--	--	--	--	--	--	--	<0.01
	01/07/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	04/08/03	<1.0	--	<0.25	<0.5	<200	<200	<10	<10	--	<0.01
	07/28/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	10/08/03	<1.0	--	<0.25	<0.5	<200	<200	--	<10	--	<0.01
	12/04/06	--	--	--	--	--	--	--	--	<5.0	--
	03/18/08	--	--	--	--	<2.0	3.6	<1.0	--	<5.0	--
	05/29/08	--	--	--	--	<2.0	2.2	<1.0	--	<b>13</b>	--
	08/19/08	--	--	--	--	<2.0	18	<1.0	--	9.0	--
12/17/09	--	--	--	--	--	4.4	--	--	--	--	
11/16/11	--	--	--	--	<2.0	20	--	--	<b>11</b>	--	
01/05/12	--	--	--	--	--	24	--	--	<b>11</b>	--	

**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS SUMMARY: CURRENT MONITORING WELLS**

Loveland Products, Inc. Billings Facility  
 Billings, Montana

Well ID	Sample Date	Chlorinated Herbicides (µg/L)				SVOC (µg/L)				Arsenic (µg/L)	Total Phenolics (mg/L)
		2,4-D	Clopyralid	Dicamba	Picloram	MCPA	MCPP	Diallate	Triallate		
<b>DEQ-7 Standard</b>		<b>70</b>	<b>1,000</b>	<b>200</b>	<b>500</b>	<b>3</b>	<b>300</b>	<b>5.5*</b>	<b>4.6</b>	<b>10</b>	<b>0.3</b>
<b>EPA RSL</b>								<b>0.52**</b>			
M-3BA	05/24/12	--	--	--	--	--	3.4	--	--	<b>17</b>	--
(cont.)	11/14/12	--	--	--	--	--	12	--	--	<b>13</b>	--
	05/22/13	--	--	--	--	--	6.6	--	--	<b>22</b>	--
	11/19/13	--	--	--	--	--	--	--	--	3.3	J
	07/17/14	--	--	--	--	--	<200	--	--	7	--
	11/11/14	--	--	--	--	--	55	--	--	2.7	--
	11/04/22	<1.0	12	<0.25	<0.50	<2.0	2.2	0.89	<4.6	2	<0.01
	11/13/23	<1.0	7.8	<0.25	<0.50	<2.0	3.1	0.51	<4.8	1	<0.01

Notes:

µg/L = Micrograms per liter

mg/L = Milligrams per liter

DEQ = Department of Environmental Quality

DEQ-7 = Circular DEQ-7 Montana numeric water quality standard, June 2019

EPA RSL = U.S. Environmental Protection Agency Regional Screening Level for tapwater

2,4-D = 2,4-dichlorophenoxyacetic acid

MCPA = 4-chloro-2 methylphenoxy acetic acid

MCPP = 2-(4-chloro-2 methylphenoxy)-propanoic acid

<0.5 = Not detected above specific minimum laboratory method reporting limit

\* = DEQ-7 standard established in 2019.

\*\* = EPA RSL (January 2015) used as groundwater standard prior to 2019.

-- = Not analyzed or no data available

d = Reporting limit increased due to sample matrix and / or result reported from a dilution

D = Duplicate sample result

J = Estimated value (value is less than reporting limit)

R = Resampled due to DEQ-7 Standard exceedance

i = Portable down-well diffuser unit deployed in well to enhance bioremediation

t = Samples received by laboratory outside recommended temperature range

**Bold** = Concentration exceeds the DEQ-7 Standard

I-17, M-3B, M-3BA = No access from May 2015 to November 2017

Analytical Methods:

Chlorinated Herbicides by EPA 8151/8151A

Low Level Herbicides/SVOC by EPA 8270C/8270E SIM

Arsenic by EPA 6020/200.8

Total Phenolics by EPA E420.4

SVOC = Semi Volatile Organic Compounds by EPA 8270C

**TABLE 5  
HISTORICAL WELL CONSTRUCTION DETAILS AND WELL USE**

Loveland Products, Inc. Billings Facility  
Billings, Montana

Well ID <sup>1</sup>	Installation Date <sup>2</sup>	Well Diameter (inches)	TOC Elevation (ft amsl)	Well Depth (ft bgs)	Screen Interval (ft bgs)		Well Use	Well Log Available?
					Top	Bottom		
ECOVA	--	--	3105.34	--	--	--	--	N
I-1,3,4,9	11/17/1987	4	--	30	15	30	Injection well for 1987 - 1996 Groundwater Remediation System.	Y
I-2,5-8,10	11/17/1987	4	--	30	20	30		
M-1	11/18/1987	2	3095.37	33	23	33	Monitoring well downgradient of facility.	N
M-3BA	--	4	3089.90	26	12	26		
M-3B	8/20/1985	4	3095.45	25.6	12.1	22.1		
M-4	--	4	3096.12	33	--	--	Secondary down/cross gradient monitoring points.	
M-5	--	4	3097.47	29	--	--		
M-6	--	4	3098.12	31	--	--		
M-7	--	4	3109.52	34	--	--	Monitoring well upgradient of facility.	
M-8 [I-8]	1983	4	3103.41	17.8	--	--	Injection well for 1983 - 1987 Groundwater Remediation System.	
M-9 [I-9]	1983	4	3100.03	25	--	--		
M-10 [I-6]	1983	4	3099.34	29.4	--	--		
M-11 [I-4]	1983	4	3097.61	25.3	--	--		
M-12 [I-3]	1983	4	3096.71	31.5	--	--		
M-13 [I-2]	1983	4	3097.97	27.5	--	--	Converted to monitoring well.	
M-14 [I-1]	1983	4	3099.06	27	--	--	Pumping well for 1983 - 1987 Groundwater Remediation System. Converted to monitoring well.	
M-15 [P-1]	1983	4	3099.62	33.5	--	--		
M-16 [P-6]	1983	4	3102.02	34.7	--	--	Monitoring well downgradient of facility.	
M-17	--	4	3089.51	21.2	--	--		
M-18 [P-10]	1983	4	3105.69	38	--	--	Pumping well for 1983 - 1987 Groundwater Remediation System. Converted to monitoring well.	
M-19 [P-11]	1983	4	3106.53	30	--	--		
M-20 [P-2]	1983	4	3099.42	34.75	--	--		
OBS-1	2/2/1988	2	3096.45	30	15	30	Secondary downgradient monitoring of AOC-5 & SWMU-6.	Y
OBS-3	2/3/1988	2	3099.45	24	14	24	Monitoring AOC-5 COC impacts (All ND)	
OBS-5	2/4/1988	2	3104.26	30	20	30	Upgradient monitoring of AOC-5 & SWMU-2	
OBS-8	4/16/1993	--	3101.61	32.21	20	32	Monitoring well, condition of Post Closure Permit	
OBS-10	5/4/1995	2	3099.57	10	5	10	Monitor integrity of waste water storage tank containment (SWMU-3)	

**TABLE 5  
HISTORICAL WELL CONSTRUCTION DETAILS AND WELL USE**

Loveland Products, Inc. Billings Facility  
Billings, Montana

Well ID <sup>1</sup>	Installation Date <sup>2</sup>	Well Diameter (inches)	TOC Elevation (ft amsl)	Well Depth (ft bgs)	Screen Interval (ft bgs)		Well Use	Well Log Available?
					Top	Bottom		
OBS-12	5/4/1995	2	3091.88	41	31	41	Monitor potential releases from SWMU-5 and impacts from AOC-6.	Y
OBS-13	5/5/1995	2	3103.09	15.5	10.5	15.5	Downgradient monitoring of deferred areas and potential impacts from SWMU-13	
OBS-15	5/2/1995	2	3103.64	40.6	30.6	40.6		
OBS-16	5/1/1995	2	3103.06	32	22	32	Groundwater flow data and downgradient monitoring of SWMU-9.	
OBS-17	5/11/1995	2	3107.84	33	23	33	Groundwater levels and monitoring upgradient of AOC-2a,8, & 10, and downgradient of AOC-7.	
OBS-19	5/11/1995	2	3108.01	43	33	43	Upgradient monitoring of AOC-2b,9, & 10b (Tank Farm #2 and rail loading areas).	
OBS-20	5/1/1995	2	3102.76	40	30	40	Groundwater gradient assessment.	
OBS-22	5/9/1995	2	3104.32	44	34	44	Downgradient monitoring of AOC-2b,9, & 10b (Tank Farm #2 and rail loading areas).	
OBS-23	5/9/1995	2	3105.32	41	31	41	Downgradient monitoring of AOC-2a,8, & 10 (Tank Farm #1 and loading areas).	
OBS-4	2/3/1988	2	3102.55	29	19	29	Monitor impacts from leaking waste water storage tank (removed).	
OBS-4R	10/26/2012	2	3102.39	29	19	29		
OBS-6	6/11/1990	2	3103.74	42	12	42	Upgradient monitoring point for AOC-6 & SWMUs-3 & -5 (waste water bldg. & tank).	
OBS-6R	5/2/2007	2	3103.39	44	34	44		
OBS-7	6/12/1990	2	3103.54	41	12.5	41	Monitor COPC impacts from SWMU-8.	
OBS-7R	--	2	3103.41	44	34	44		
OBS-9	5/3/1995	2	3105.55	41	31	41	Monitor COPC impacts from SWMUs 1 and 4	
OBS-11	5/5/1995	2	3104.80	41	31	41	Monitor potential releases from SWMU-5 and impacts from AOC-6.	
OBS-14	5/3/1995	2	3103.08	41	31	41	Downgradient monitoring of deferred areas and potential impacts from SWMU-13.	
OBS-18	5/10/1995	2	3103.76	44	34	44	Downgradient monitoring of AOC-2b,9, & 10b (Tank Farm #2 and rail loading areas).	
OBS-21	--	2	3108.99	23.5	11	21	Monitoring upgradient of facility.	

**TABLE 5  
HISTORICAL WELL CONSTRUCTION DETAILS AND WELL USE**

Loveland Products, Inc. Billings Facility  
Billings, Montana

Well ID <sup>1</sup>	Installation Date <sup>2</sup>	Well Diameter (inches)	TOC Elevation (ft amsl)	Well Depth (ft bgs)	Screen Interval (ft bgs)		Well Use	Well Log Available?
					Top	Bottom		
OBS-2	2/2/1988	2	3098.56	30	20	30	Secondary downgradient monitoring of AOC-5 & SWMU-6.	Y
P-3	10/4/1987	6	--	32	20	30	Pumping well for 1987 - 1996 Groundwater Remediation System	N
P-4	11/17/1987	6	3093.96	--	--	--		Y
P-5	11/21/1997	6	3095.56	33	18	32.5		N
P-6	11/22/1997	6	3093.27	31	16	30		Recovery well for 1987 - 1996 Groundwater Remediation System.
P-7	--	6	--	--	--	--		
P-8	9/19/2000	6	--	32.5	29	32.5		
P-9	9/25/2000	6	--	31.25	27.25	31.25		
R-1 - R-19	10/4/1987	6	--	35	25	35	First wells installed on site to monitor groundwater down- and cross-gradient of ponds.	
TW-1	11/11/1981	4	--	35.1	25.1	35.1		
TW-2	11/12/1981	4	--	32.5	22.5	32.5		
TW-3	11/12/1981	4	--	32	22	32		
TW-4	11/13/1981	4	--	35.2	25.2	35.2		
TW-5	6/16/1983	4	--	33.1	23.1	33.1		Groundwater monitoring east of ponds.

**Notes:**

ft amsl = Feet above mean sea level

ft bgs = Feet below the ground surface

COPC = Chemical of potential concern

AOC = Area of Concern

SWMU = Solid Waste Management Unit

-- = Information not available.

N = Where well logs are not available, well information was inferred from historical reports and/or driller's well abandonment logs.

<sup>1</sup> = Well IDs in brackets indicate original well designation. Many M-series monitoring wells were originally installed as remediation system pumping [P-x] or injection [I-x] wells.

<sup>2</sup> = Well installation dates are approximate and based on information in historical reports or association with groundwater remediation systems.

**TABLE 6**  
**LONG-TERM GROUNDWATER MONITORING AND ISOC PERFORMANCE MONITORING PLAN<sup>a</sup>**

Loveland Products, Inc. Billings Facility  
 Billings, Montana

Sample Parameter	Analytical Method	Laboratory Reporting Limit (µg/L)	Cleanup Level <sup>b</sup> (µg/L)	Justification
2,4-D	EPA 8151A	0.20	70	Processed onsite Detected in groundwater
Dicamba	EPA 8151A	0.20	200	Processed onsite Detected in groundwater
MCPA	EPA 8151A	0.20	4	Processed onsite Detected in groundwater
MCPP	EPA 8151A	0.20	300	Processed onsite Detected in groundwater
Clopyralid	EPA 8151A	0.20	1,000	Chemical processed onsite Detected in groundwater
Picloram	EPA 8151A	0.20	500	Historically processed onsite Detected in groundwater
Diallate	EPA 8270D	0.25	5.5 <sup>c</sup>	Historically processed onsite Detected in groundwater
Triallate	EPA 8270D	0.25	5	Historically processed onsite Detected in groundwater
Arsenic	EPA 6020	3	10	Naturally occurring Detected in groundwater
Total Phenolics	EPA 420.4	0.01	0.3	Breakdown product of 2,4-D, MCPP, and MCPA Detected in groundwater
DO, Temp, SEC, ORP, pH	YSI Field Meter	--	--	MNA parameters
Depth to groundwater	Water Level Meter	--	--	Groundwater hydrology conditions

**NOTES:**

Groundwater samples will be collected from the well network semi-annually (2nd and 4th quarters).

<sup>a</sup> = As presented in 2017 Groundwater Corrective Measures Implementation Work Plan

<sup>b</sup> = Unless otherwise noted, all cleanup levels reference the Circular DEQ-7 Montana Numeric Water Quality Standards, June 2019.

<sup>c</sup> = USEPA Regional Screening Level (RSL) for Tap Water of 0.52 µg/L was initially used as the standard until the DEQ-7 Standard was released in June 2019.

EPA = Environmental Protection Agency

µg/L = micrograms per liter

2,4-D = 2,4-dichlorophenoxyacetic acid

MCPA = 4-chloro-2 methylphenoxy acetic acid

MCPP = 2-(4-chloro-2 methylphenoxy)-propanoic acid

TON = Total Oxidized Nitrogen (Nitrate as nitrogen + Nitrite as nitrogen)

DO = Dissolved Oxygen

Temp = Temperature (degrees Celsius)

SEC = Specific Electrical Conductance

ORP = Oxidation Reduction Potential

-- = Not applicable

**APPENDIX A**

**SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN –  
CURRENT STATUS 8/25/2023**

**GROUNDWATER CMI CERTIFICATION REPORT**

LPI Billings Facility  
Billings, Montana

November 2025

**ATTACHMENT A**  
**SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN**  
**CURRENT STATUS - 8/25/2023<sup>1</sup>**  
 Loveland Products, Inc. Billings Facility  
 Billings, Montana

Area	Name	Study Area	RFI Status	CMS Status	CMI Status
SA1-15	Soil Exceedance at SA1-15	1	C	C	C
AOC 5	Soil Pile Area	1	NFA		
SWMU 2	Old Wastewater Storage Tank	2	C	NFA	
SWMU 10a	Rail Track Pan 1	2	C	NFA	
SWMU 10b	Rail Track Pan 2	2	C	NFA	
AOC 2a	Tank Farm	2	C	NFA	
AOC 2b	Tank Farm	2	C	NFA	
AOC 8	Drum Storage Area	2	C	NFA	
AOC 9	Standing Liquid	2	C	NFA	
AOC 10	Stained Area	2	C	NFA	
SWMU 1	Wastewater Sump Building	3	C	NFA	
SWMU 4	Water Decanter Building	3	C	NFA	
SWMU 5	Water Treatment Building	3	C	NFA	
SWMU 11a	Boiler Blowdown Area	3	C	NFA	
AOC 6	Drum Storage Area	3	C	NFA	
AOC 14	Area West of Decanter Building	3	C	NFA	
SWMU 7	Groundwater	4	C	IP	
SWMU 8	Open Air Storage	5	C	NFA	
SWMU 13	Warehouse 2 Wastewater Collection Tank	5	C	NFA	
SWMU 15	Raildock Accumulation Area	5	C	NFA	
SWMU 16	New Shuttle Wash Sump	5	C	NFA	
AOC 4	Special Process Area	5	C	NFA	
AOC 3	Paved Area Below Storage Pad	IDS	NFA		
AOC 5 <sup>2</sup>	Soil Pile Area	IDS	NFA		
AOC 12	Coulson Ditch Breaches	NA	NFA		
SWMU 3	New Wastewater Storage Tank	NA	NFA		
SWMU 6	Surface Impoundment (evaporation ponds)	NA	C	C	C
SWMU 9	Crushed Bag Storage Area	NA	NFA		
SWMU 11b	Boiler Blowdown Area	NA	NFA		
SWMU 12	North Property Line Waste Area	NA	NFA		
SWMU 14	Sanitary Septic Drainfield System	NA	NFA		
AOC 1	Abandoned Injection Wells	NA	NFA		
AOC 7	Drum Storage Area	NA	NFA		
AOC 11	Stained Area	NA	NFA		
AOC 13	Railcar Waste Accumulation Area	NA	NFA		

**Notes:**

<sup>1</sup>=As provided in September 5, 2023 Deferred Area Screening Level Risk Assessment Approval, and No Further Action Determination letter.

<sup>2</sup>=Remote soil pile east of AOC 5.

C= Complete    IDS = Independent Study    IP = In progress    NA = Not applicable    NFA = No further action

**APPENDIX B**

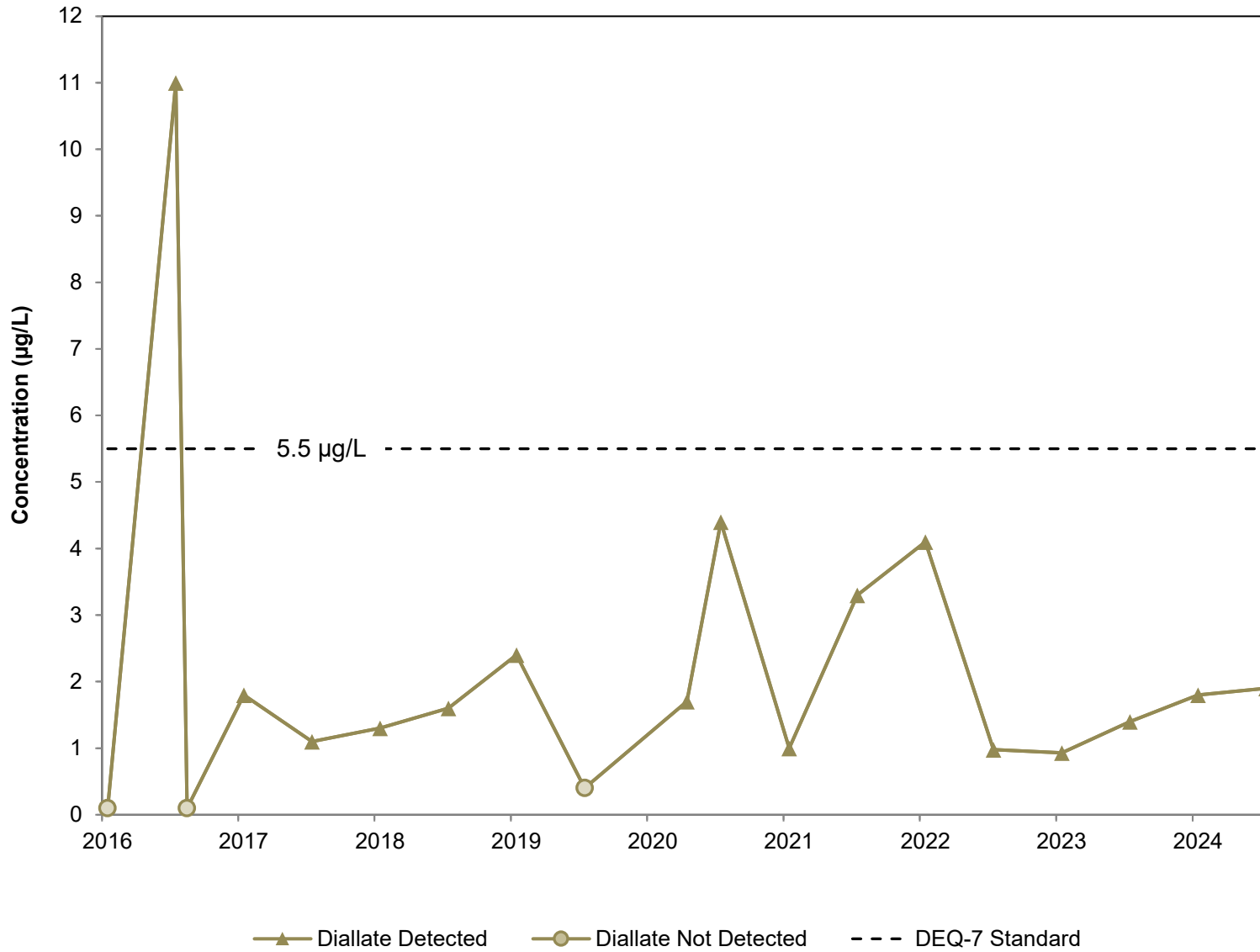
**GRAPHS OF EXCEEDING COPC CONCENTRATIONS AND DEPTH TO  
GROUNDWATER OVER TIME**

**GROUNDWATER CMI CERTIFICATION REPORT**

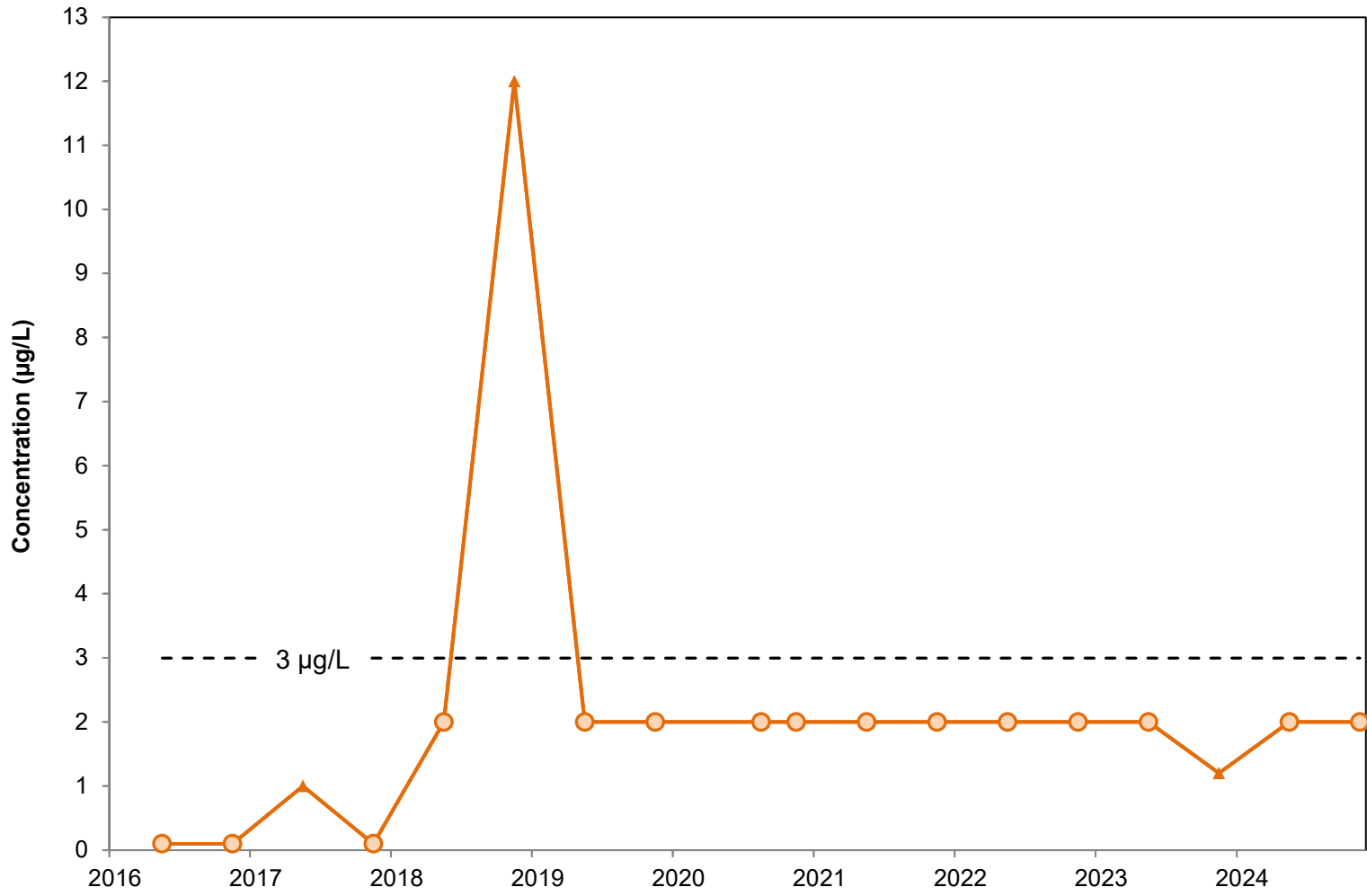
LPI Billings Facility  
Billings, Montana

November 2025

**Well MW-3  
LPI Billings, MT  
Diallate Concentrations Over Time**

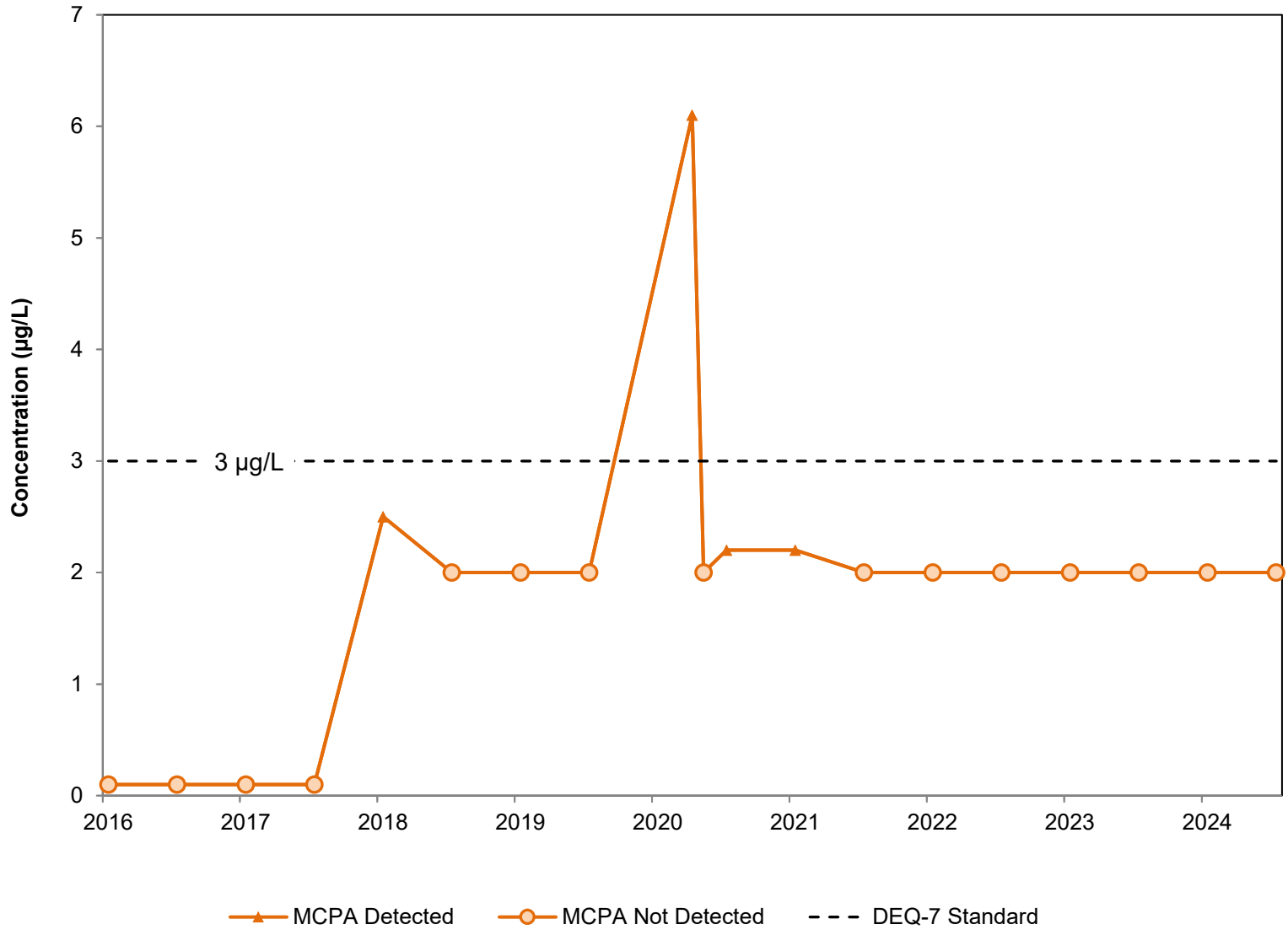


# Well MW-1 LPI Billings, MT MCPA Concentrations Over Time

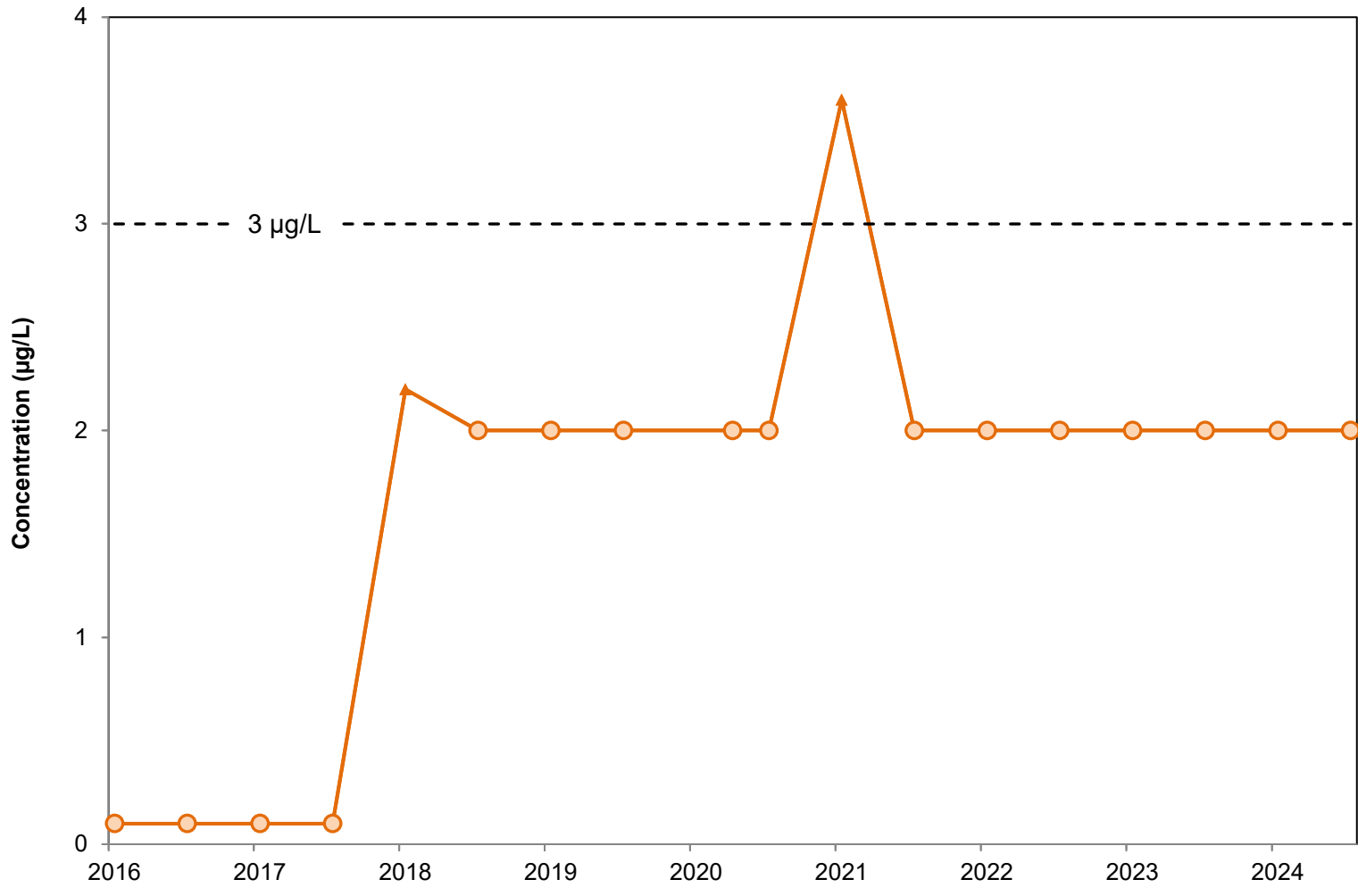


—▲— MCPA Detected    —○— MCPA Not Detected    - - - DEQ-7 Standard

**Well MW-2  
LPI Billings, MT  
MCPA Concentrations Over Time**

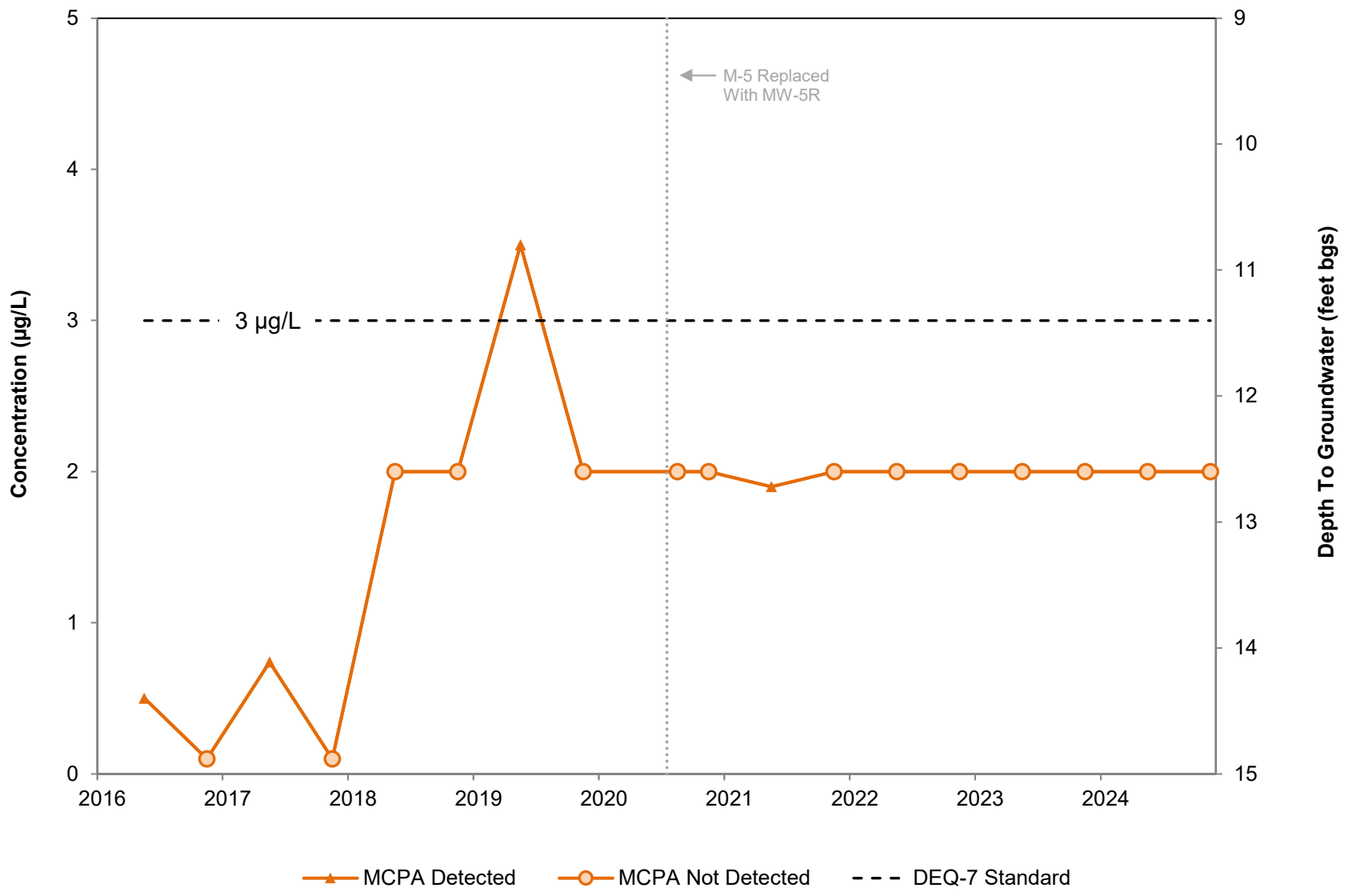


**Well MW-3  
LPI Billings, MT  
MCPA Concentrations Over Time**

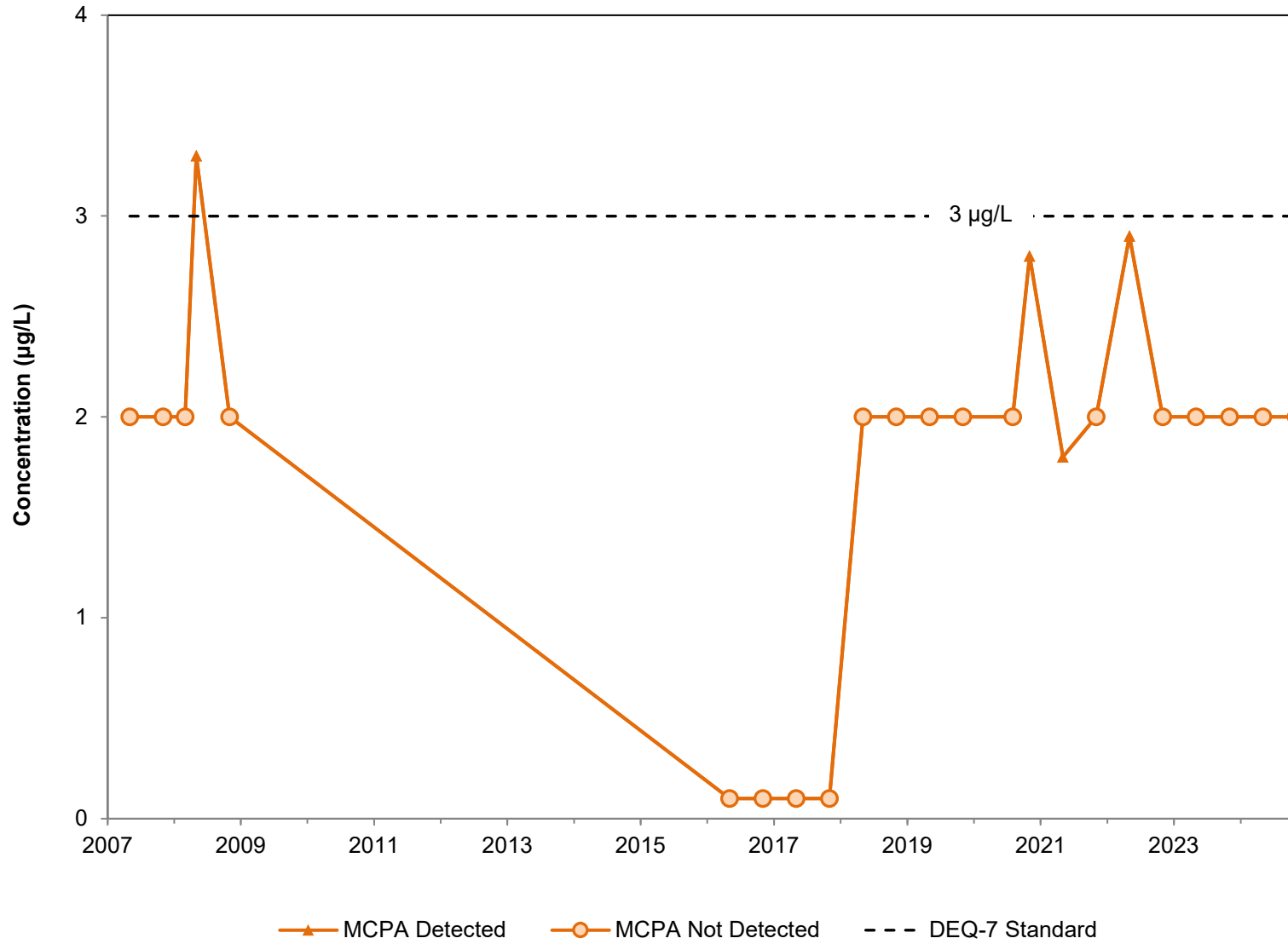


—▲— MCPA Detected    —○— MCPA Not Detected    - - - DEQ-7 Standard

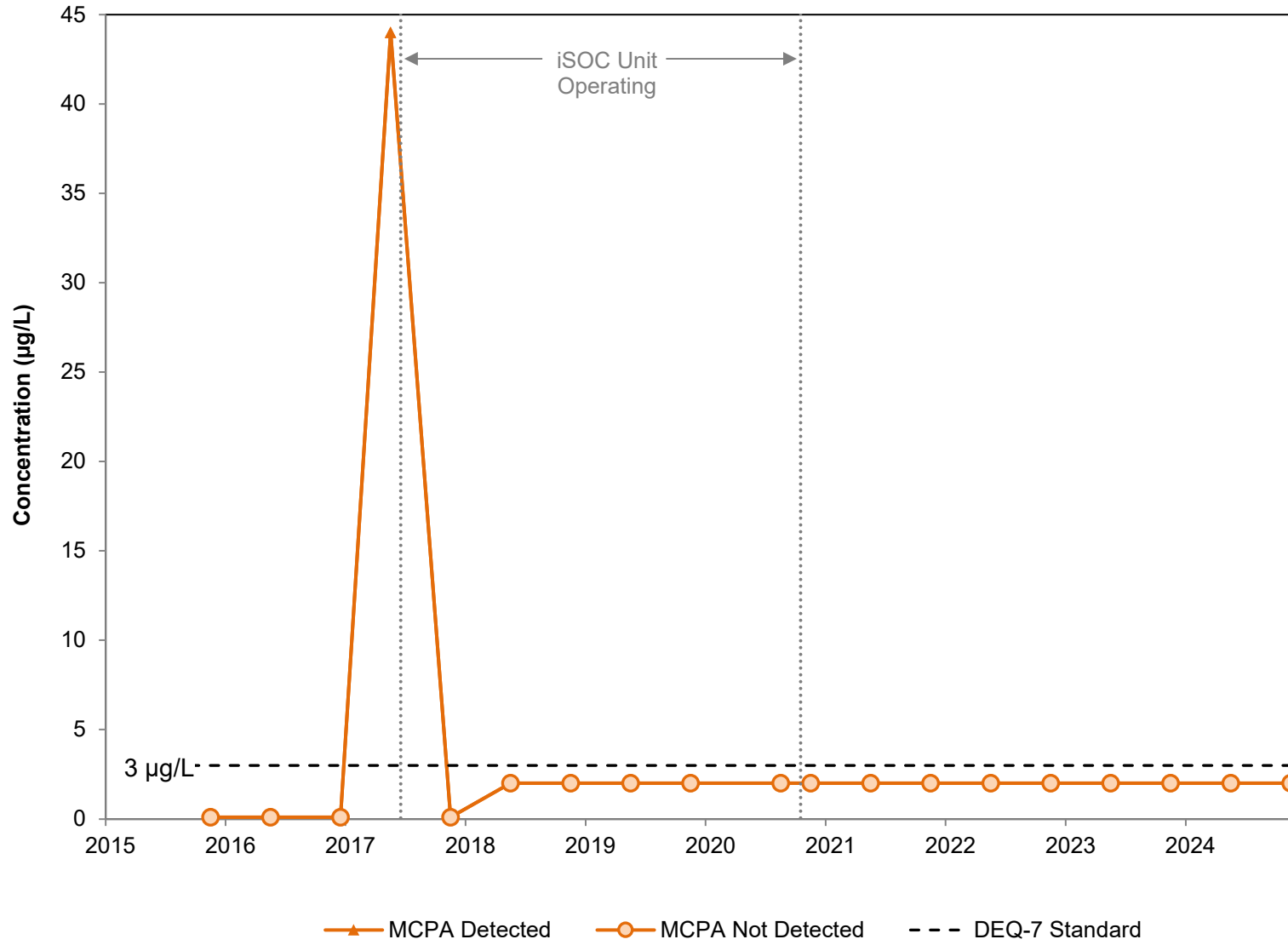
# Well M-5 / MW-5R LPI Billings, MT MCPA Concentrations Over Time



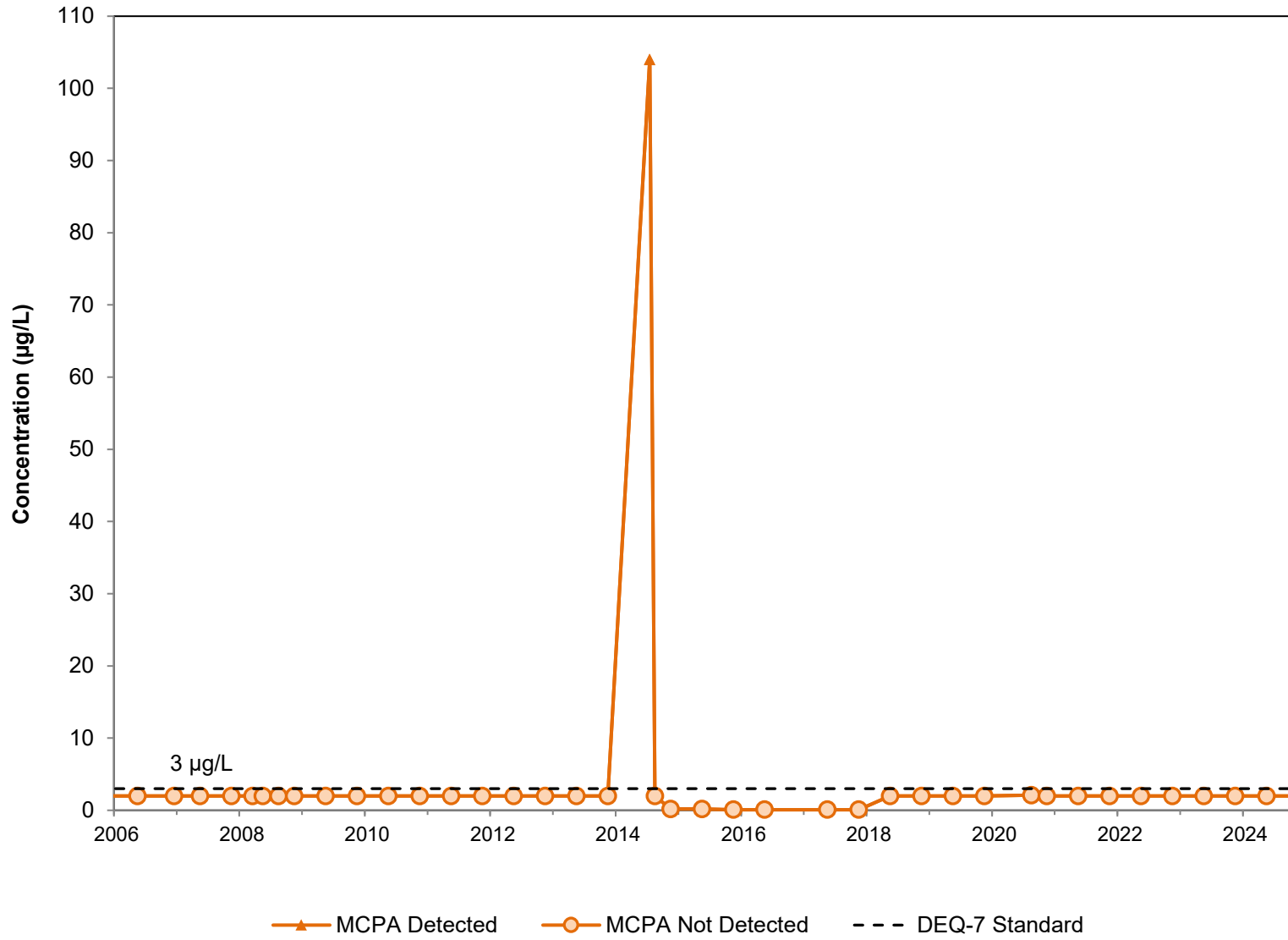
**Well M-7  
LPI Billings, MT  
MCPA Concentrations Over Time**



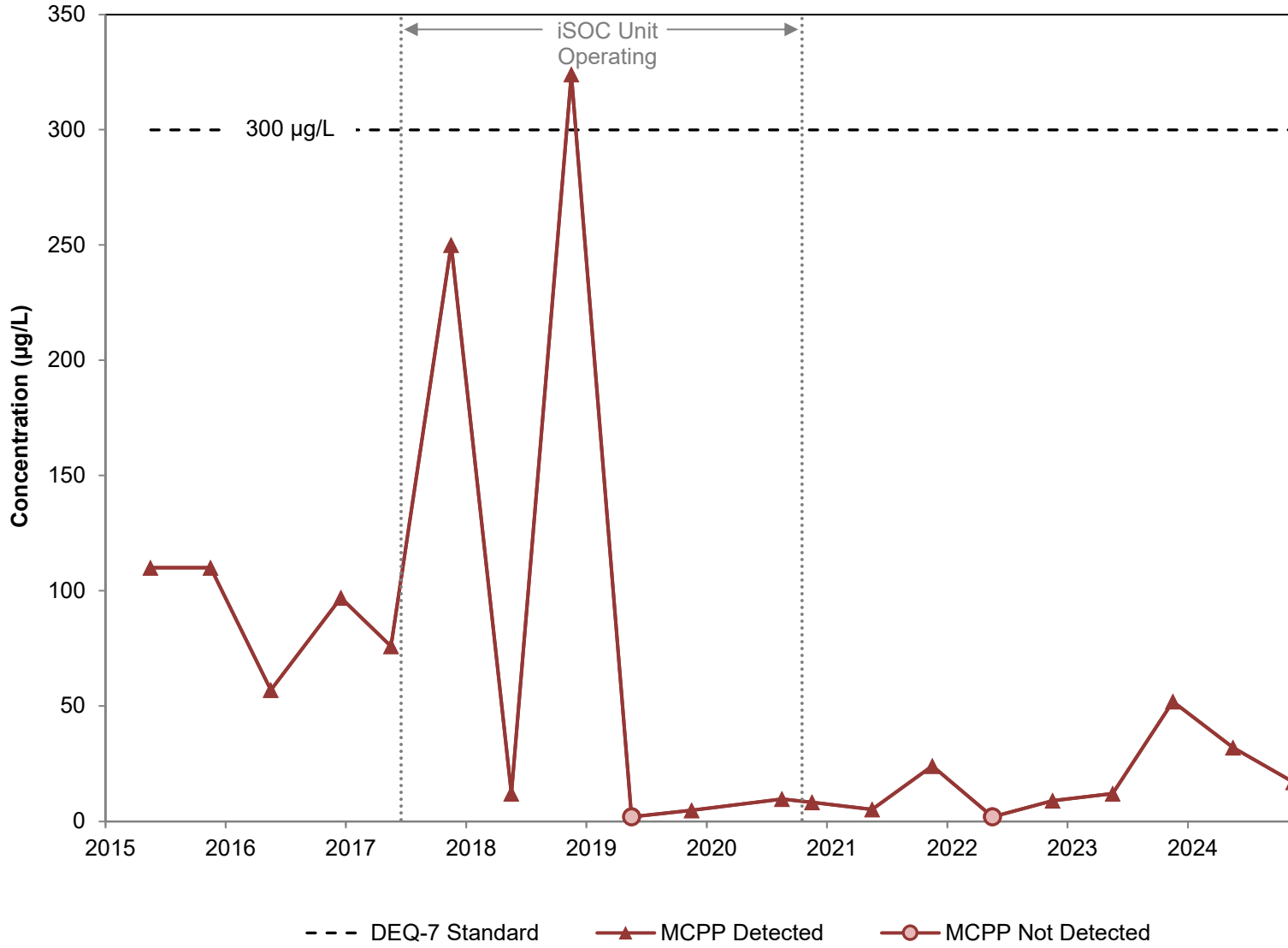
# Well OBS-1 LPI Billings, MT MCPA Concentrations Over Time



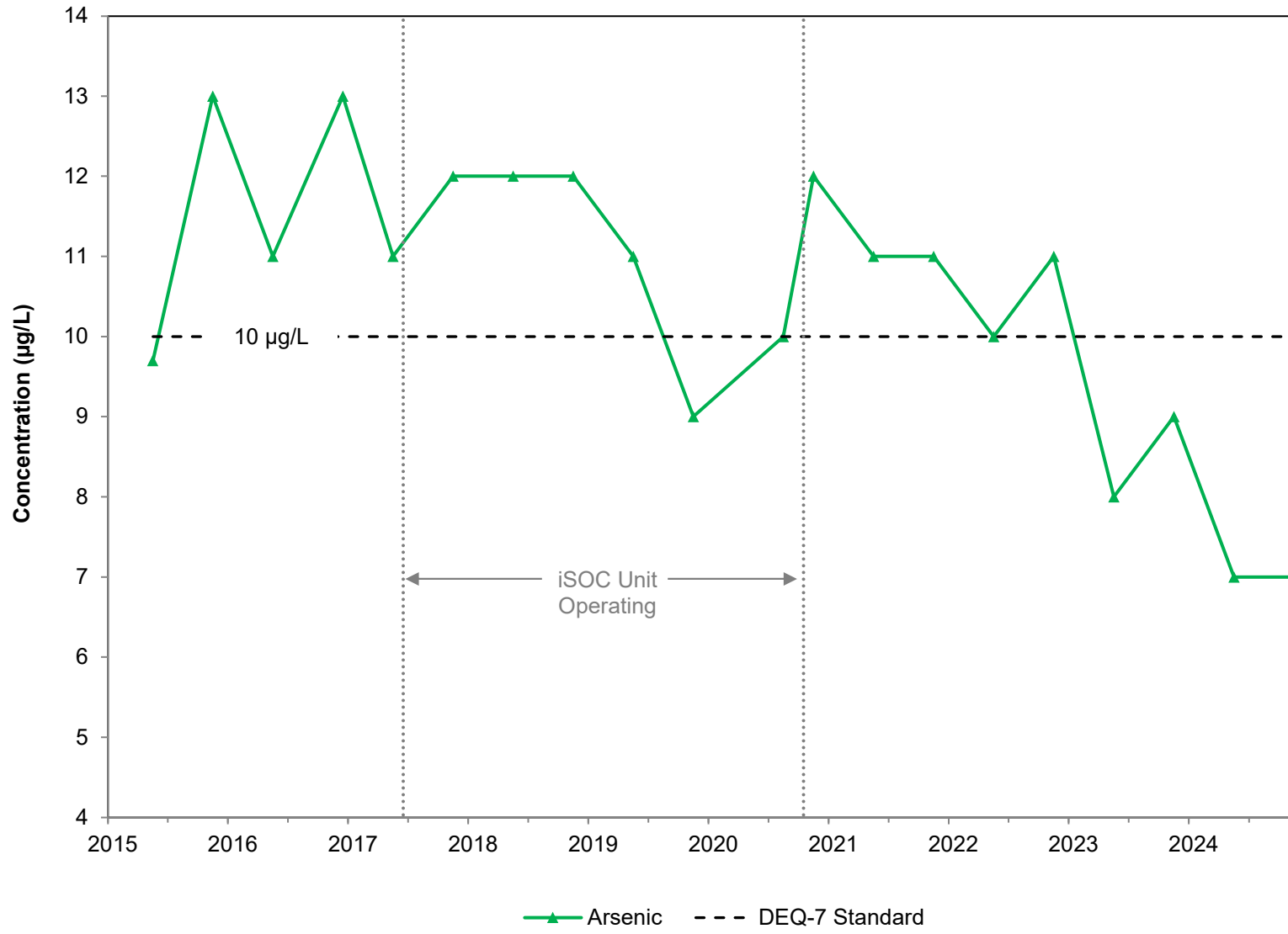
# Well OBS-2 LPI Billings, MT MCPA Concentrations Over Time



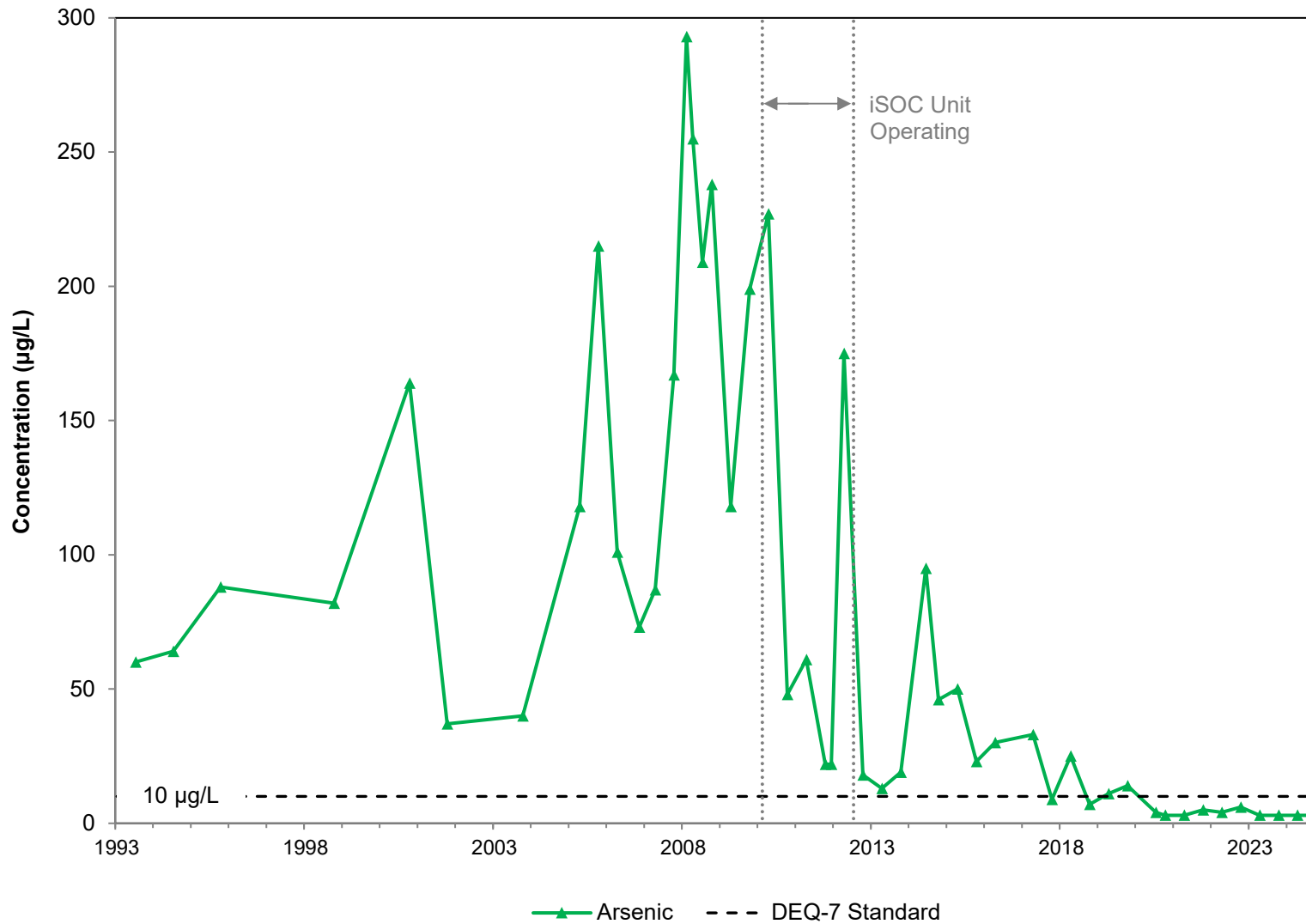
# Well OBS-1 LPI Billings, MT MCPD Concentrations Over Time



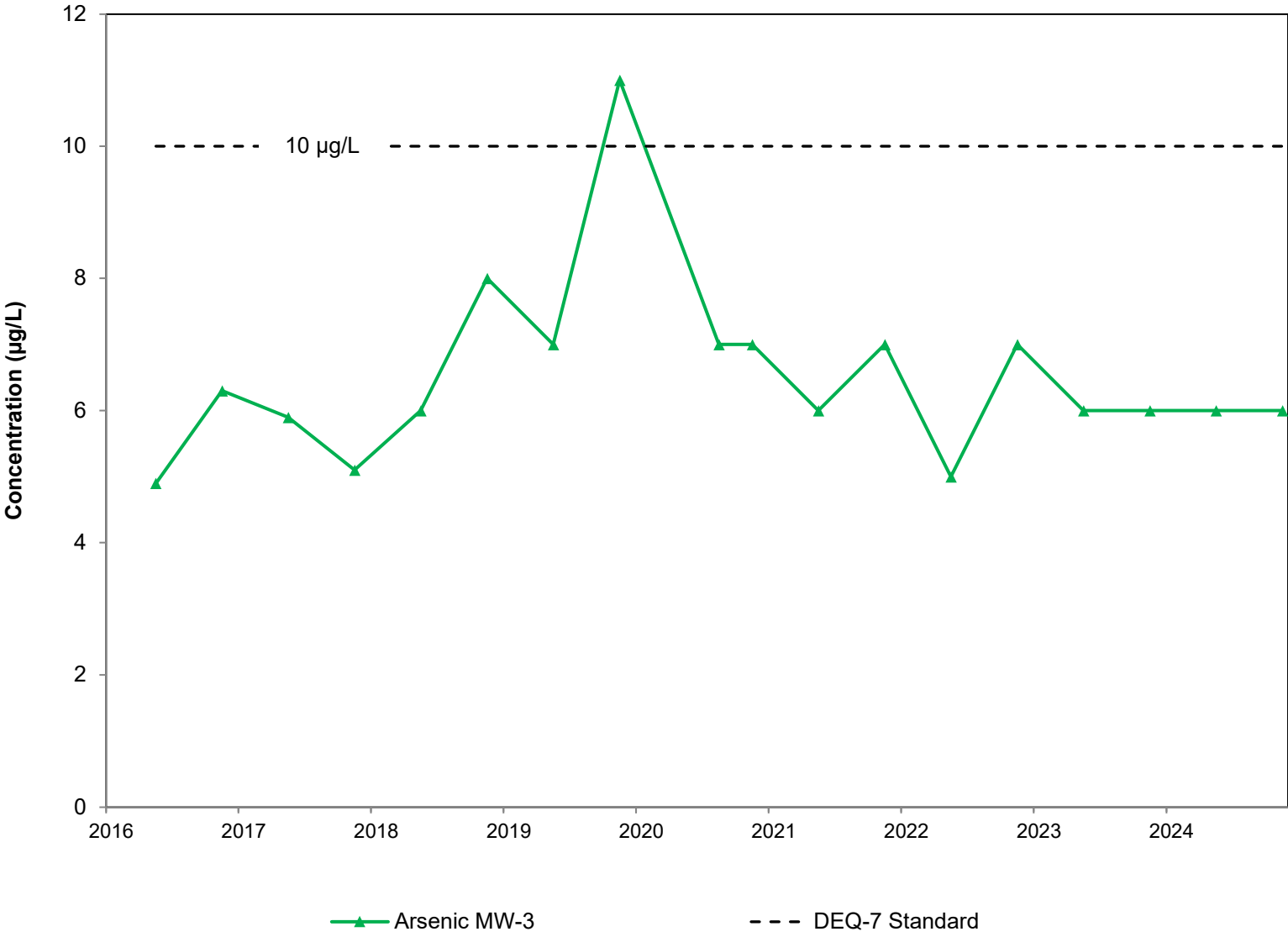
**Well OBS-1**  
**LPI Billings, MT**  
**Arsenic Concentrations and Groundwater Depth vs. Time**



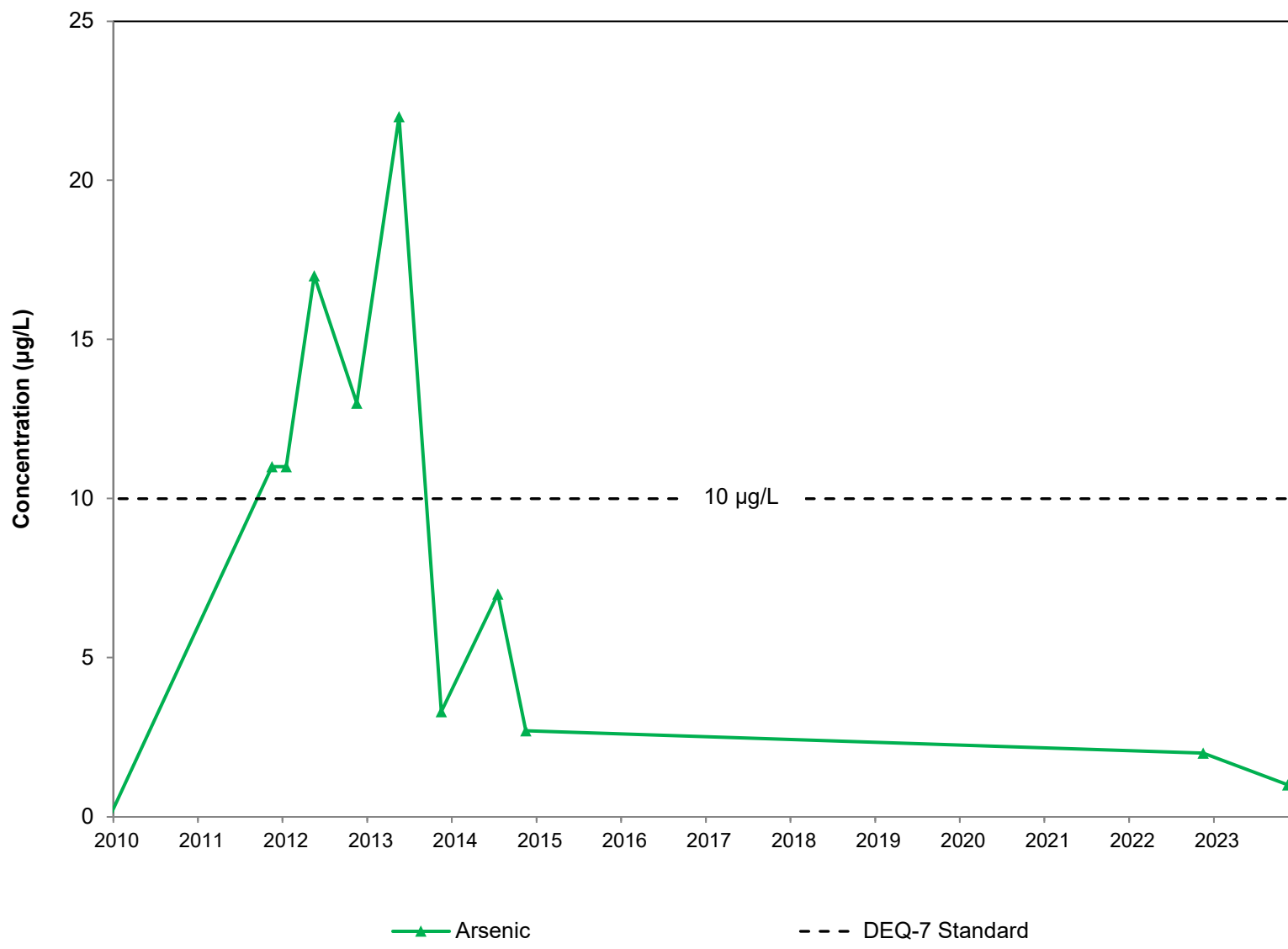
**Well OBS-2  
LPI Billings, MT  
Arsenic Concentrations and Groundwater Depth vs. Time**



**Well MW-3  
LPI Billings, MT  
Arsenic Concentrations OverTime**



**Well M-3BA  
LPI Billings, MT  
Arsenic Concentrations and Groundwater Depth vs. Time**



**APPENDIX C**

**ENVIRONMENTAL CONTROL EASEMENT**

**GROUNDWATER CMI CERTIFICATION REPORT**

LPI Billings Facility  
Billings, Montana

November 2025

**DECLARATION OF ENVIRONMENTAL CONTROL EASEMENT ON REAL PROPERTY**

THIS DECLARATION OF ENVIRONMENTAL CONTROL EASEMENT ON REAL PROPERTY (Environmental Control Easement) is made by Loveland Products, Inc., hereinafter Grantor, as of March 25, 2019, and the State of Montana, Department of Environmental Quality, hereinafter the Grantee, pursuant to the Environmental Control Easement Act, Montana Code Annotated (MCA) Section 76-7-201, *et. seq.* and other applicable Montana law;

WHEREAS, Grantor is the owner of certain real property located in Billings, Montana (known hereinafter as the "Environmental Control Site"), comprising approximately 27.7 acres, described by geocode 03-000C060860-001, more particularly shown in the map attached as Exhibit A.

WHEREAS, the Environmental Control Site is subject to environmental remedial activities under the Resource Conservation and Recovery Act (RCRA) and Montana Hazardous Waste Act (MCA) pursuant to the Corrective Action Order on Consent, Order #MHWCAO-15-01 (known hereinafter as the "CAO"), provided as Exhibit B, between the Grantee and Grantor and other environmental laws.

WHEREAS, Grantor desires to restrict certain uses and activities to further the purpose of compliance with the CAO and to further the purpose of remediation at the Environmental Control Site pursuant to the Environmental Control Easement Act, and therefore, desires to grant, convey, and transfer, as Grantor, this Environmental Control Easement, hereinafter "Environmental Control Easement" to the Grantee;

WHEREAS, the Grantee, consents to receive, as Grantee, this Environmental Control Easement from Grantor to further the State of Montana's interest in remediation of the Environmental Control Site and for the purpose of protecting the public health, welfare, and safety of Montana's people and environment;

NOW, THEREFORE, Grantor, in consideration of the mutual covenants contained herein and according to the terms and conditions contained herein, hereby conveys, transfers, and grants to the Grantee this perpetual Environmental Control Easement pursuant to the Environmental Control Easement Act, in, on, over, under, and upon the Environmental Control Site as more fully described herein:

- 1) The following activities or uses may not be conducted on the Environmental Control Site:
  - a) DRILLING WELLS FOR GROUNDWATER: Drilling groundwater wells within the boundaries of the Environmental Control Site without the express prior written approval of the Grantee.
  - b) GROUNDWATER: Use of groundwater is prohibited for any purpose other than industrial purposes and monitoring purposes in compliance with the CAO or other Grantee approved plan, unless water is withdrawn according to a Grantee approved plan and treated according to standards set by the Grantee for a given use, as set forth in writing by the Grantee.
  - c) MONITORING WELLS: Any activity that would compromise the integrity of a monitoring well, including removal of a seal on a closed well, except as approved in a remediation plan or otherwise agreed to in writing by the Grantee.

C

C

C

- d) USE OF LAND SURFACE: Use of land surface for any purpose that would not be classified as Industrial Use. This includes Residential Use, Agricultural Use, and Recreational Use.
- e) REMEDY: Any action that would directly or indirectly: (i) interfere with, hinder, delay, diminish or frustrate the implementation, effectiveness, purposes, integrity, or operation and maintenance of the remedy required in the CAO, the terms and restrictions of which are incorporated herein, or any other remedial action required under federal, state, or local law or regulation or (ii) creates a risk of migration of hazardous wastes or substances or a potential hazard to public health, safety, or welfare of the environment, or results in a disturbance of the structural integrity of any controls designed or utilized at the Environmental Control Site to contain hazardous wastes or substances or limits human or environmental exposure to the hazardous wastes or substances.

2) Grantor agrees and covenants:

- a) To comply with all requirements of the CAO and subsequent corrective actions, orders and/or written directions issued by the Grantee;
  - b) To provide the Grantee with all pertinent information and data required by the CAO or as otherwise requested by the Grantee to further the corrective action purpose of remediation at the Environmental Control Site;
  - c) To provide access to Grantee's employees, its representatives, assigns, and contractors conducting Grantee-approved actions to enter the Environmental Control Site in a reasonable manner and at reasonable times to ensure compliance with the terms and conditions of the Environmental Control Easement and to implement, operate, maintain, and monitor all remedial work and technologies consistent with the CAO; and
  - d) To maintain remedial structures consistent with the CAO.
- 3) Grantor retains for itself, its successors and/or assigns with respect to the Environmental Control Easement all rights otherwise available to it, including use of the Environmental Control Site for all lawful purposes not inconsistent with or limited by the terms of this Environmental Control Easement and the right to give, sell, assign or otherwise transfer part or all of Grantor's interest in the Environmental Control Site, subject to this Environmental Control Easement.
- 4) This Environmental Control Easement runs with the land in perpetuity and binds all Grantor and all successors and assigns of Grantor.
- 5) Grantor shall provide all persons who acquire any interest in the Environmental Control Site a true and complete copy of the CAO, any amended or successor corrective actions, and/or Grantee's orders thereto and/or any other pertinent Grantee's orders regarding the Environmental Control Site.



- 6) Grantor shall file this Environmental Control Easement with Yellowstone County Clerk and Recorder with Deed #3714587.
- 7) Grantor shall promptly notify the Grantee in writing of any conveyance of all or a portion of Environmental Control Site or any interest in Environmental Control Site.
- 8) Grantor shall provide a copy of this Environmental Control Easement to all prospective purchasers prior to the conveyance of all or a portion of the Environmental Control Site.
- 9) The Grantor shall provide to the Grantee an annual report on or before April 30 of each year providing a description of actions taken to monitor the Environmental Control Site, that status of compliance with the Environmental Control Easement, and any other information that the Grantee may require relating to compliance with the provisions of the Environmental Control Easement.
- 10) The Grantor shall notify, in writing, the Grantee of the Grantor's dissolution, the cessation of operations, or the occurrence of any other event that renders the Grantor incapable of performing its obligations under the terms of the Environmental Control Easement.
- 11) Nothing in this Environmental Control Easement shall be construed to limit the remedies of the Grantee or any other party to enforce any such remedies provided for by law or equity.

**IN WITNESS WHEREOF**, Grantor and Grantee have set their hands on the day and year first above written.

**GRANTOR:**

Loveland Products, Inc.

Signed: Michael Williams

Print Name: Michael Williams

Title: Plant Manager

**GRANTEE:**

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

By: Jenny Chambers  
Jenny Chambers, Administrator  
Waste Management and Remediation Division

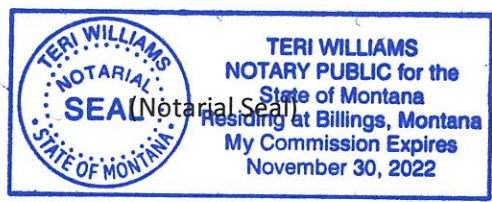
DEQ Legal Review by: Nicholas A. Whitaker  
Nicholas A. Whitaker



STATE OF Montana )  
 : ss.  
COUNTY OF Yellowstone

On this 3rd day of April, 2019, before me, a Notary Public for the State of Montana, personally appeared Michael Williams, the Plant Manager of Loveland Products, Inc. Known to me or satisfactorily proven to be the person(s) who executed the within instrument, and acknowledged that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my notarial seal on the day and year first above written.

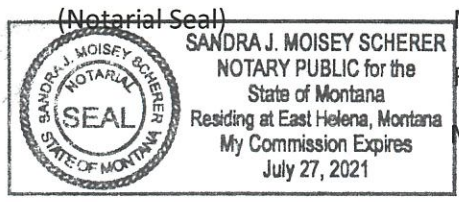


Notary Signature: [Signature]  
Notary Name: Teri Williams  
Notary Public for the State of Montana  
Residing at: Billings, MT  
My commission expires: 11.30, 20 22

STATE OF MONTANA )  
 : ss.  
COUNTY OF LEWIS & CLARK )

On this 25th day of March, 2019, before me, a Notary Public for the State of Montana, personally appeared Jenny Chambers, Waste Management and Remediation Division Administrator, for and on behalf of DEQ. Known to me or satisfactorily proven to be the person(s) who executed the within instrument, and acknowledged that they executed the same.

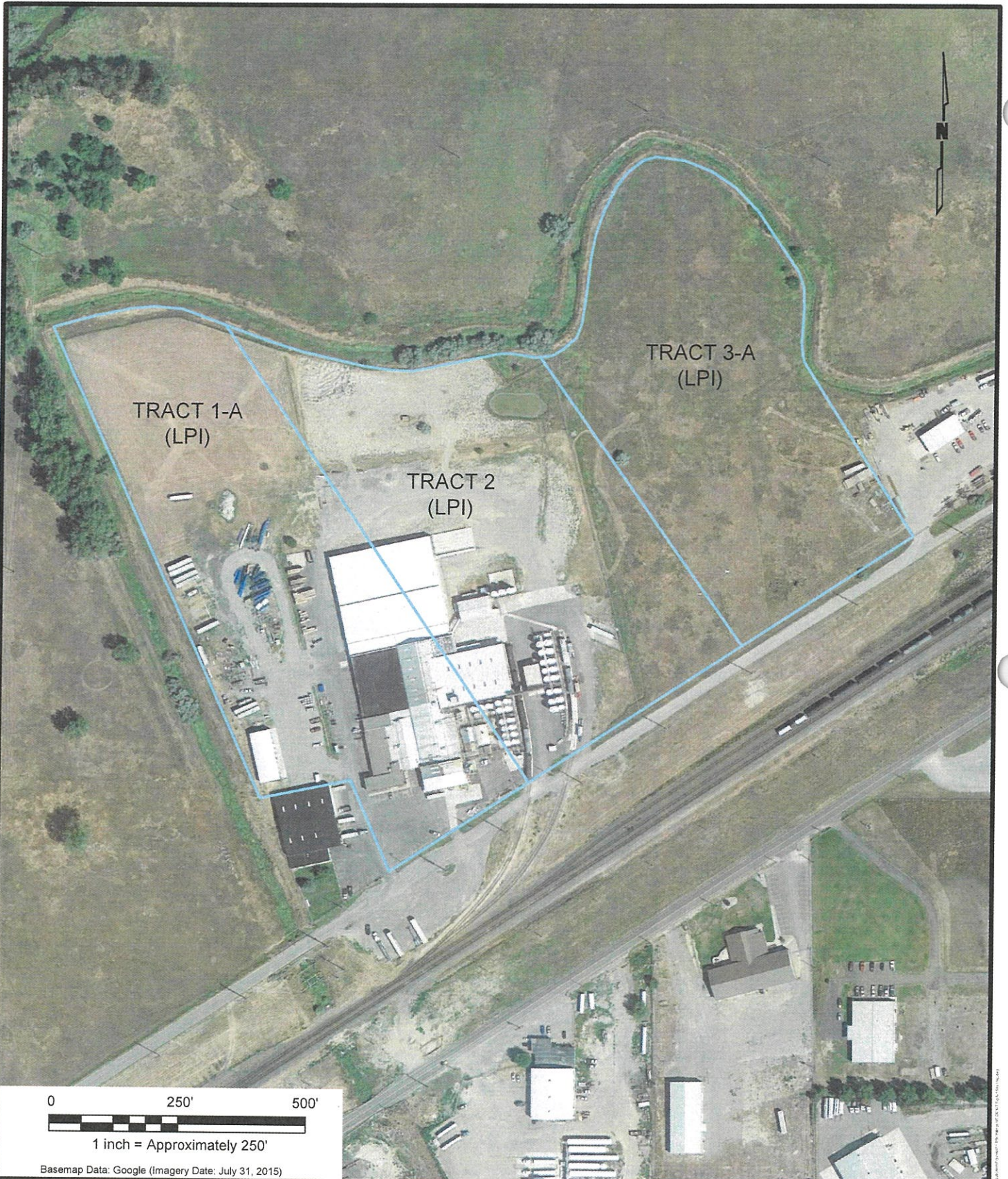
In witness whereof, I have hereunto set my hand and affixed my notarial seal on the day and year first above written.



Notary Signature: [Signature]  
Notary Name: Sandra J. Moisey Scherer  
Notary Public for the State of Montana  
Residing at: East Helena, MT  
My commission expires: July 27, 2021

NOTARY PUBLIC for the  
State of Maryland  
My Comm. Expires 03/31/2025  
JESSIE M. WILKINS  
10000

Exhibit A



320 Flint Street  
 Reno, Nevada 89501  
 (775) 622-0857

## SITE MAP

LPI Billings  
 1525 Lockwood Road  
 Billings, Montana

DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: DAE
DATE: 4/11/2018	ACAD FILE: LPI 1525 Lockwood Road.dwg	
PROJECT NO.: 03005-2018	PLOT SCALE: APPROX. 1" = 250'	

FIGURE A-1

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320 Flint Street  
 Reno, Nevada 89501  
 (775) 622-0857

## RESTRICTED AREAS

LPI Billings  
 1525 Lockwood Road  
 Billings, Montana

DESIGNED BY: SPF	DETAILED BY: SPF	CHECKED BY: DAE
DATE: 4/11/2018	ACAD FILE: <small>ac_100_000_001.dwg</small>	
PROJECT NO.: 03005-2018	PLOT SCALE: APPROX. 1" = 250'	

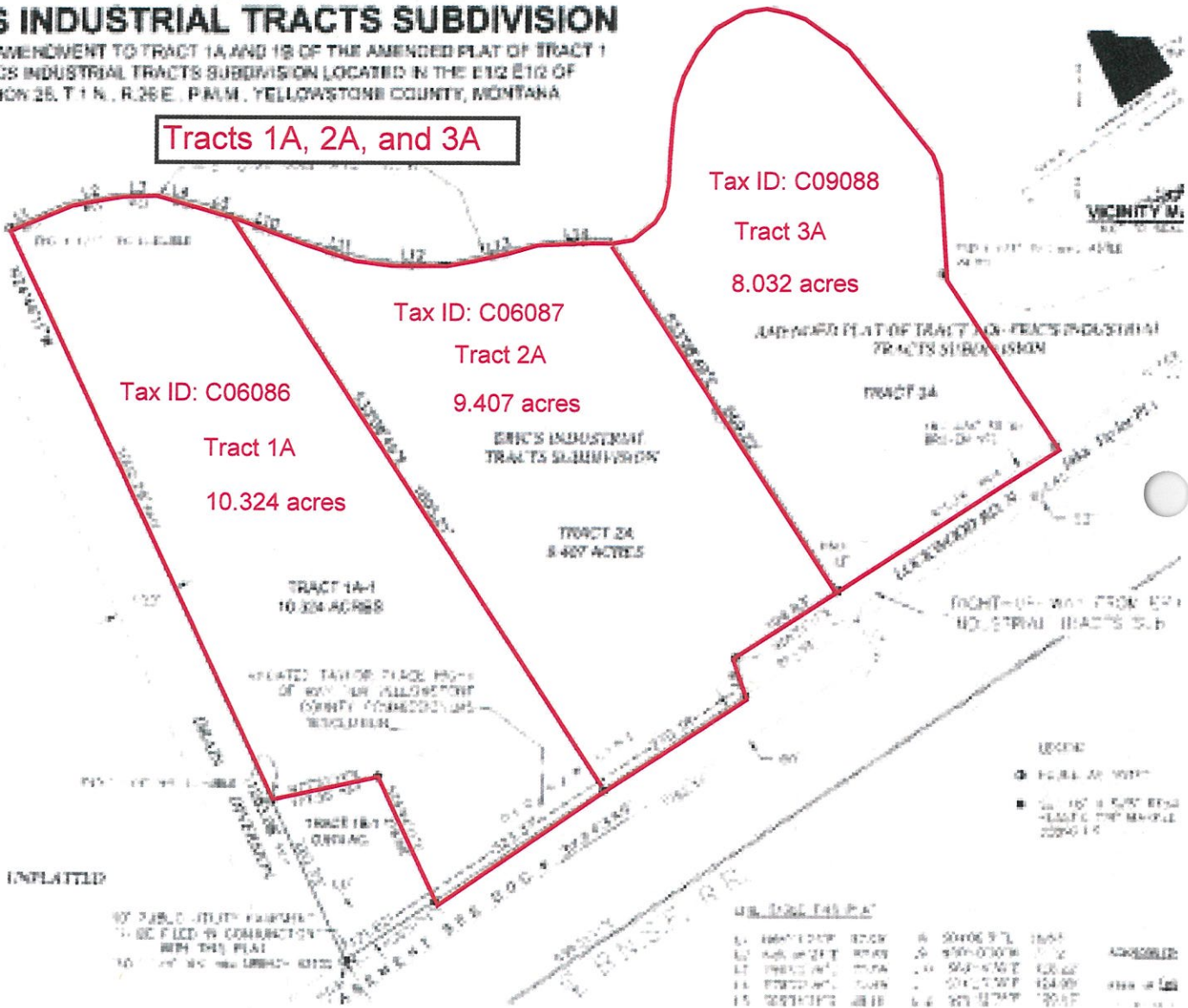
FIGURE A-2

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SECOND AMENDED PLAT OF TRACTS 1 AND 2 OF  
**ERIC'S INDUSTRIAL TRACTS SUBDIVISION**

BEING AN AMENDMENT TO TRACT 1A AND 1B OF THE AMENDED PLAT OF TRACT 1  
 OF ERIC'S INDUSTRIAL TRACTS SUBDIVISION LOCATED IN THE E12 E12 OF  
 SECTION 26, T1 N., R.26 E., P.100 M., YELLOWSTONE COUNTY, MONTANA

**Tracts 1A, 2A, and 3A**



NOT BE FILED IN CONSTRUCTION WITH THIS PLAT

M.B. BOOK REFERENCE			
1	10000000	1000	1000
2	10000000	1000	1000
3	10000000	1000	1000
4	10000000	1000	1000
5	10000000	1000	1000

Large

**Exhibit B**

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

IN THE MATTER OF:	)	
	)	
Loveland Products, Inc.	)	<b>CORRECTIVE ACTION</b>
1525 Lockwood Road	)	<b>ORDER ON CONSENT</b>
Billings, Montana 59101	)	
	)	<b>MHWCAO-15-01</b>
	)	
EPA ID No. MTD079711198	)	
	)	
Respondent	)	

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**ATTACHMENTS:**

Attachment A: SWMU and AOC Current Status Table; Site Location Map, Site Location Aerial Photograph, SWMU and AOC Location Map,

Attachment B: RCRA Facility Investigation Scope of Work Outline

Attachment C: Baseline Risk Assessment Scope of Work Outline

Attachment D: Corrective Measures Study Scope of Work Outline

Attachment E: Corrective Measures Implementation and Interim Measures Work Plan Scope of Work Outline

Attachment F: Compliance Schedule

## **I. JURISDICTION**

- A. This Corrective Action Order on Consent (Order) is issued by the Montana Department of Environmental Quality (DEQ) to Loveland Products, Inc. (Respondent or LPI), the owner and operator of the herbicide formulating facility located in Billings, Montana at Section 16, Township 1 North, Range 26 East in Yellowstone County, Montana. DEQ and LPI each may be referred to herein individually as a "Party" and collectively as the "Parties."
- B. This Order is issued pursuant to the authority vested in the Director of DEQ by §75-10-425, MCA, of the Montana Hazardous Waste Act (the Act).
- C. This authority has been delegated to the DEQ signatories below.
- D. LPI consents to and agrees not to contest DEQ's jurisdiction to issue this Order or to enforce its terms. Further, LPI will not contest DEQ's jurisdiction to seek compliance with this Order in any subsequent enforcement proceedings, either administrative or judicial, to require LPI's full or interim compliance with the terms of this Order, or to impose sanctions specified herein for violations of this Order.
- E. LPI waives any rights to request a hearing on the issuance of this Order pursuant to §2-4-603(1)(a), MCA, and consents to the issuance of this Order as an order issued pursuant to §75-10-425, MCA.

## **II. APPLICABILITY/PARTIES BOUND**

- A. This Order shall apply to and be binding upon LPI and its successors, assigns, heirs, trustees, and receivers, and upon DEQ. This Order is an enforceable document in lieu of a renewal of permit MTHWP-04-01, and supersedes and replaces Permit MTHWP-04-01.
- B. LPI shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order within fourteen (14) days of the Effective Date of this Order, or within fourteen (14) days after retaining the services of such contractors, subcontractors, laboratories or consultants, whichever is later. LPI shall require its contractors, subcontractors, laboratories and consultants to perform work that meets the requirements of this Order and LPI shall be responsible for such work meeting the requirements of this Order.
- C. No change in ownership or corporate or partnership status relating to the LPI Facility will in any way alter LPI's responsibility under this Order. Any conveyance of title, easement or other interest in the Facility, or a portion of the Facility, shall not affect LPI's obligations under this Order. LPI will be responsible for and liable for any failure to carry out all activities required of LPI by the terms and conditions of the Order, regardless of LPI's use of employees, agents, contractors, or consultants' to perform any such tasks.
- D. LPI shall give written notice of this Order to any transferee prior to transfer of ownership or operation of the Facility or any portion thereof, and shall notify DEQ at least twenty (20) days prior to any such transfer of ownership or operation.

- E. LPI agrees to undertake all actions required by this Order.
- F. LPI shall be responsible for instituting corrective action as necessary to protect human health and/or the environment. See §75-10-425, MCA, and 40.CFR 264.101, incorporated by reference in ARM 17.53.801.

### III. DEFINITIONS

Unless otherwise expressly provided herein, terms used in this Order shall have the definitions given to them by the federally authorized Montana Hazardous Waste program. Pursuant to Section 3006(b) of RCRA, 42 U.S.C. section 6926(b), effective July 7, 1984, EPA granted the State of Montana (the State) final authorization to operate a hazardous waste regulatory program in lieu of the federal regulatory program. All references in this Order to State regulations are those State regulations authorized by EPA under Section 3006(b) of RCRA. For those terms that are defined in RCRA or its implementing regulations, but for which the Montana program has not received federal authorization, the definitions in RCRA and its implementing regulations shall apply.

Acceptable shall mean that the quality of submittals or completed work is sufficient to warrant DEQ review in order for DEQ to determine whether the submittal or work meets the terms and conditions of this Order, including all attachments, approved work plans and/or DEQ's written comments, and DEQ guidance documents. Acceptability of submittals or work, however, does not necessarily imply that they are approvable or will be approved pursuant to this Order. Approval by DEQ of submittals or work, however, establishes that those submittals were prepared, or work was completed, in a manner acceptable to DEQ.

Additional Work shall mean any activity or requirement that is not expressly covered by this Order or attachments but is requested by LPI or is determined by DEQ to be necessary to ensure completion of the Work in accordance with the standards and schedule under an approved Work Plan.

Administrative Record shall mean the record compiled and maintained by DEQ in connection with the implementation of this Order (considering ARM 17.53.208 concerning confidentiality).

Advanced Notice of Proposed Rulemaking or ANPR shall mean the proposed rule (61 Fed. Reg. 19432 (May 1, 1996)) created to provide a strategy to clean up solid waste management units at hazardous waste management facilities under RCRA and to provide guidance to the corrective action program.

Aquifer shall mean a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

Areas of Concern or AOC shall mean any area of the Facility at or from which a release to the environment of any hazardous waste or hazardous constituent has occurred, is suspected to have occurred, or may occur, regardless of the time, frequency, or duration of the release, and which may present an unacceptable risk to human health or the environment regardless of whether such area meets the definition of a solid waste management unit (SWMU). The term Areas of Concern includes, but is not limited to, areas and discernible units at which solid wastes have been placed, at any time, irrespective of whether the area or unit was intended for the management of solid or

hazardous waste. Examples of Areas of Concern include, but are not limited to, landfills, surface impoundments, pits, waste piles, surface impoundments, incinerators, tank systems (including any storage, treatment, or accumulation tank system), container storage units, waste or wastewater treatment system units, and recycling units, or other areas or systems that received solid or hazardous waste or hazardous constituents, or released hazardous waste or hazardous constituents at any time.

Background values represent the concentrations of constituents in soil and groundwater from geologically and hydrogeologically equivalent sources not impacted by the Facility.

Business day shall mean a day other than a Saturday, Sunday, or Federal Holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal Holiday, the period shall run until the end of the next business day.

CERCLA shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §9601, et seq.

Completed Units shall mean those Study Areas, SWMUs and AOCs on Attachment A which are identified as completed (“C”) or which are identified as no further action (“NFA”). No further action is required for completed units unless releases are discovered in the future from those units, as defined in Section VIII.F.

Comply or Compliance shall mean completion of work required by this Order including submittal of documents of a quality acceptable to DEQ, in accordance with work plans approved by DEQ and in the manner and time specified in an approved work plan, this Order or any modification thereof. LPI must meet both the quality (see definition of acceptable) and timeliness components of a particular requirement to be considered to be in compliance with the terms and conditions of this Order.

Contaminant of Potential Concern or COPC shall mean any physical, chemical, biological, or radiological substance or matter present in any media that are potentially site-related and for which data is of sufficient quality for use in a quantitative risk assessment.

Contaminant of Concern shall mean any physical, chemical, biological, or radiological substance or matter present in any media at concentrations that may pose a threat to human health and the environment.

Contaminant of Ecological Concern shall mean a substance detected at a hazardous waste site that has the potential to affect ecological receptors adversely due to its concentration, distribution, and mode of toxicity.

Contractor shall mean any person including, but not limited to, any consultant, laboratory, or subcontractor retained by LPI to conduct or monitor any portion of the work performed pursuant to this Order.

Corrective Action Management Unit or CAMU shall mean an area within a facility that is designated by DEQ in accordance with 40 CFR 264.552, incorporated by reference in ARM

17.53.801, for the purposes of implementing corrective action requirements, under 40 CFR 264.101, as incorporated by reference in ARM 17.53.801, and 75-10-425 MCA. A CAMU shall only be used for the management of remediation wastes pursuant to implementing such corrective action requirements at the Facility and must comply with the requirements of 40 CFR 264.552, incorporated by reference in ARM 17.53.801.

Corrective measures shall mean those measures or actions necessary to control, prevent or mitigate the release, potential release or movement of hazardous waste or hazardous constituents into the environment, or within or from one environmental medium to another.

Corrective Measures Implementation or CMI shall mean those activities necessary to initiate, monitor, maintain, and complete the corrective measures DEQ selects in accordance with Section VIII: *Work to be Performed*.

Corrective Measures Study or CMS shall mean the investigation and evaluation of potential alternative corrective measures to protect human health and/or the environment from the release or potential release of hazardous wastes, or hazardous constituents, into the environment from and/or at the Facility.

Day shall mean a calendar day unless expressly stated to be a business day.

Decision Document shall mean the document issued by DEQ setting forth DEQ's selection of the corrective measures to be implemented at the Facility to achieve final cleanup objectives. The Decision Document includes a Final Determination letter; the Statement of Basis; and DEQ's Response to Comments on the Statement of Basis, if comments were received.

Deferred Units means those SWMUs and AOCs on Attachment A which are identified as deferred until plant closure or construction ("D"). The Deferred Units will be addressed under Section VIII.(G) of this Order.

Effective Date shall mean the date upon which this Order is signed by both DEQ and LPI.

EPA shall mean the United States Environmental Protection Agency, and any successor departments or agencies of the United States.

Estimated Quantitation Limit or EQL is the lowest concentration of a parameter in water and soil that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. EQLs are based on a general estimate for the method and are generally 5 to 10 times the method detection limit. Analytical laboratories may also refer to this term as the Practical Quantitation Limit (PQL) or Reporting Limit (RL).

Facility shall, for the purposes of this Order, mean the property of LPI located east of the city of Billings, Montana in the area locally known as Lockwood. It encompasses approximately 27 acres within Section 26, Township 1 North, Range 26 East, Yellowstone County, Montana. The latitude is 45°48'21" and the longitude is 108°26'46" and includes all contiguous property under the control of LPI as identified in the map contained in Attachment A.

Groundwater shall mean the water in the saturated zone beneath the land surface.

Hazardous constituents shall mean "hazardous waste constituents" as defined in 40 CFR 260.10, incorporated by reference in ARM 17.53.301 or any constituent identified in Appendix IX of 40 CFR Part 264 as incorporated by reference in ARM 17.53.801.

Hazardous waste shall mean "hazardous waste" as defined in 40 CFR 261.3, incorporated by reference in ARM 17.53.501, and §75-10-403, MCA.

Hazardous Waste Management Unit shall mean "hazardous waste management unit" as that term is defined in 40 CFR 260.10, incorporated by reference in ARM 17.53.301.

Interim Measure or IM shall mean those actions that can be, or are, initiated in advance of implementation of the final corrective measures for the Facility and are designed to stabilize, control, and/or abate immediate threats to human health and/or the environment and/or minimize the spread of contaminants.

Land Disposal shall mean "land disposal" as that term is defined in 40 CFR 268.2, incorporated by reference in ARM 17.53.1101.

The method detection limit (MDL) is defined as the sample- and method-specific concentration at which there is a specified assurance of the presence and identity of a given parameter in a sample. The analytical laboratory follows the procedures in the most up-to-date version of *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846) to obtain the method detection limit. Based on nationwide laboratory experience, the U.S. Environmental Protection Agency has developed estimated method detection limits for specific parameters and methods in SW-846.

Montana Hazardous Waste Act, the Act, or MHWCA shall mean the Montana Hazardous Waste Act, as amended.

Order shall mean this Corrective Action Order on Consent and all attachments hereto, which by this reference are incorporated herein, and all specifications, reports, schedules, and work plans approved by DEQ pursuant to this Order, and all documents incorporated into this Order, as provided herein.

Receptors shall mean those humans, animals, or plants and their habitats that receive or are affected by, or may receive or be affected by, releases of hazardous waste or hazardous constituents at, or migrating from, the Facility.

Regulated Unit shall mean an operational unit (or closed operational unit) used to treat, store or dispose of hazardous waste. The Regulated Unit referred to in this Order is the Surface Impoundment.

Release shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, seeping, leaching, dumping, placing, or disposing into the environment of any hazardous wastes, or hazardous constituents.

Resource Conservation and Recovery Act or RCRA shall mean the federal Solid Waste Disposal Act, 42 USCA §§6901 et seq., as amended.

Remediation Waste shall mean "remediation waste" as the term is defined in 40 CFR 260.10, incorporated by reference in ARM 17.53.301.

RCRA Facility Investigation or RFI shall mean the investigation and characterization of the source(s) and/or releases of hazardous wastes and hazardous constituents and the nature, extent, direction, rate, movement, and concentration of such releases of hazardous wastes and/or hazardous constituents, that have been, or may be released or may reasonably be expected to be released into the environment from or at and/or to migrate from the Facility.

Scope of Work or SOW shall mean the outlines set forth in Attachments B through E that LPI must use to develop all required work plans and reports under Section VIII: *Work to be Performed*.

Solid Waste Management Unit or SWMU shall mean any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. SWMUs include MHWCA-regulated hazardous waste management units. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

Stabilization shall mean the actions employed to control or abate releases that pose an actual or potential threat to human health and the environment; to control off-site releases from the migration of contaminated groundwater, and to contain or remove source areas for actual or potential releases.

Statement of Basis shall mean the document issued by DEQ setting forth DEQ's selection of the corrective measure(s) to be implemented at the Facility to achieve final cleanup objectives.

Submittal shall mean any document LPI is required to send to DEQ pursuant to this Order, including but not limited to all work plans, reports and progress reports.

Surface Impoundment means and consists of the three (3) former evaporation ponds/surface impoundments owned and /or operated by LPI at the Facility as described in Section IV.D. The Surface Impoundment is identified as SWMU 6 on Attachment A.

Work or obligation shall mean any activity LPI must perform to comply with the requirements of this Order.

Work Plan shall mean the detailed plans prepared by LPI as required under this Order. All work plans and modifications or amendments thereto are incorporated into this Order and are an enforceable part of this Order when approved in writing by DEQ.

#### **IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW**

For purposes of this Order, and based on the Administrative Record, DEQ makes the following findings of fact and conclusions of law:

- A. LPI is a "person" within the meaning of 40 CFR 260.10, as incorporated by reference in ARM 17.53.301, and §75-10-403, MCA.
- B. LPI is a Delaware corporation registered to conduct business in the State of Montana.
- C. LPI is a generator of hazardous waste and the current owner and operator of a facility containing a hazardous waste management unit located in Billings, Montana.

Surface Impoundment (SWMU 6)

- D. LPI owned and/or operated the Surface Impoundment at the Facility as a hazardous waste management unit on or after November 19, 1980, the applicable date that renders facilities subject to interim status requirements or the requirement to have a permit under §§3004 and 3005 of RCRA.
- E. The Surface Impoundment was constructed to hold wastewater containing 2,4-D generated during herbicide production. The Surface Impoundments was also referred to as evaporation ponds in historical documents. Wastes contained in the Surface Impoundment was classified as RCRA hazardous wastes U240 (2,4-D, salts and esters) and D016 (2,4-D).
- F. On November 20, 1987, DEQ approved the closure certification for the Surface Impoundment. On September 16, 1991, LPI's RCRA Part B Permit Application included an amendment to add pavement to the cap of the Surface Impoundment, which was approved by DEQ and thereafter installed by LPI. In 2012, the cap was removed in connection with the excavation discussed in Paragraph H below.
- G. LPI submitted a RCRA Part B Permit Application on September 16, 1991, and as amended on June 4, 1992. A post-closure care permit for the Surface Impoundment, Montana Hazardous Waste Permit Number MTHWP-92-01, was issued on December 18, 1992. On December 7, 1992, a separate permit was issued for requirements regarding RCRA as amended by the Hazardous and Solid Waste Act (HSWA) of 1984. The second permit was issued jointly by EPA and DEQ with EPA having the primary enforcement responsibility. On December 26, 2000, the State of Montana received final authorization from EPA to implement HSWA and the State of Montana became the primary agency responsible for enforcement of both permits. On July 15, 2002, LPI submitted a RCRA Part B Permit Renewal Application, and as amended on September 30, 2002, and November 4, 2002. The hazardous waste permit MTHWP-92-01 was reissued on June 1, 2004, as permit number MTHWP-04-01. Permit MTHWP-04-01 included conditions regarding both RCRA and HSWA requirements, including post-closure care and groundwater monitoring of the Surface Impoundment. LPI has complied in all material respects with Permit MTHWP-04-01.
- H. On June 22, 2012, LPI submitted a request for temporary authorization to allow removal of waste from the Surface Impoundment. On July 10, 2012, DEQ approved the temporary authorization. On December 28, 2012, DEQ received LPI's Surface Impoundment Excavation Completion Report and approved the Report on February 4, 2013. Excavation of waste from the Surface Impoundment achieved industrial cleanup levels. LPI submitted an Independent Engineer's certification of completion for the Surface Impoundment excavation

on February 28, 2013, and a revised Risk Assessment dated on August 8, 2013, which have been approved by DEQ. Based on information in the Surface Impoundment Excavation Completion Report and Risk Assessment, DEQ notified LPI by letter of July 16, 2013, that, subject to conditions in the letter, it has no objection to construction of a building in the area of the closed Surface Impoundment.

1. Any changes to the existing groundwater monitoring system and monitor well locations as a result of the construction will be addressed in the CMI Work Plan for Facility-wide groundwater corrective action.
  2. No further soil investigation or corrective measures are required for the Surface Impoundment unless releases are discovered in the future from the Surface Impoundment as defined in Section VIII.F.
- I. DEQ has determined that the Surface Impoundment is situated among SWMUs or AOCs where a release has occurred and both the Surface Impoundment and one or more SWMUs or AOCs are likely to have contributed to the release. It is not necessary to apply the groundwater monitoring and corrective action requirements of 40 CFR 264.91 through 264.100 because alternative requirements will protect human health and the environment. [40 CFR 264.91(f)]

#### Facility Soils

- J. LPI submitted a Human Health and Ecological Risk Assessment in May 2002, with an addendum provided in August 2005. LPI completed a Corrective Measures Study Report for soil in February 2008 with pertinent updates provided in February 2010. The soil-only Corrective Measures Study Report was approved by DEQ on May 15, 2008. DEQ issued a Statement of Basis on April 1, 2010 for the selected soil corrective measures and held a 45-day public comment period from April 1, 2010 through May 19, 2010. DEQ issued a Decision Document for soil corrective measures on June 1, 2010. The selected remedy consisted of source removal of contaminated soil and deferral of the Deferred Units until the time of plant closure or construction. Soil Corrective Measures Implementation was certified complete for the Completed Units and approved by DEQ on April 7, 2011.

#### Ground Water (SWMU 7)

- K. Hazardous constituents have been detected in compliance monitoring wells downgradient and upgradient of the Surface Impoundment. In 2007, during LPI's production of the Corrective Measures Study for soil, LPI conducted a site-specific risk assessment and a soil leaching model, SESOIL, to further refine the assessment of the Facility pertaining to exposure and risk. Based on the findings of the SESOIL modeling, soil leaching to groundwater is not a concern and further evaluation of soil leaching to groundwater is not required.
- L. LPI submitted the Groundwater Corrective Measures Study Report, Revision 2 in October 2012 and an addendum to the report November 5, 2013, which has been approved by DEQ. DEQ's selection of the corrective measures for groundwater and implementation of

groundwater corrective measures have not yet been completed; requirements for completion of these tasks are included in this Order.

- M. There are or have been releases of hazardous wastes or hazardous constituents into the environment at or from the Facility. Therefore, this Order includes the requirements for facility-wide corrective action pursuant to 40 CFR 264.101.
- N. The actions required by this Order are considered by DEQ to be necessary to protect human health and/or the environment.

## **V. ORDER**

Pursuant to §75-10-425, MCA, and, under the Act, LPI agrees to and is hereby ordered to perform the Work required by this Order, in the manner and by the dates specified herein. All Work undertaken pursuant to this Order shall be performed in a manner consistent with 40 CFR 264.101, incorporated by reference in ARM 17.53.801, MHLA and RCRA, and other applicable Federal, and State laws and regulations, applicable EPA guidance, and this Order.

## **VI. STATEMENT OF PURPOSE**

In entering into this Order, the mutual objectives of DEQ and LPI are for LPI to complete the remaining corrective measures at the Facility necessary to address any on-site and off-site contamination in accordance with the requirements of this Order. Corrective action activities will include performing activities necessary to correct or evaluate actual or potential threats to human health and/or the environment resulting from the release or potential release of hazardous waste or hazardous constituents at or from the Facility.

## **VII. SUBMITTAL REQUIREMENTS**

One hard copy and one electronic copy of all documents required to be submitted pursuant to this Order shall be hand delivered, sent by certified mail (return receipt requested), or by overnight express mail or courier to the DEQ Project Manager specified in Section XVI. One copy of all documents required to be submitted pursuant to this Order shall be hand delivered; sent by certified mail (return receipt requested), or by overnight express mail or courier to EPA Region 8 – Denver Office, Program Director, Resource Conservation and Recovery Program, 1595 Wynkoop Street, 8P-R, Denver, CO 80202. Upon written request by LPI, DEQ may approve in writing different submittal requirements.

## **VIII. WORK TO BE PERFORMED**

Pursuant to §75-10-425, MCA, LPI agrees to and is hereby ordered to perform the acts specified in this Section, in the manner and by the dates specified herein. All Work undertaken pursuant to this Order shall be performed in a manner consistent with the attached Scope(s) of Work (if and as may be applicable) and all Work Plans required herein; RCRA and other applicable Federal laws and their implementing regulations; and applicable EPA guidance documents.

The framework for corrective action requirements in this Section is contained in the Federal Registers dated July 27, 1990, (55 FR No. 145, pp 30797-30884), and May 1, 1996, (61 FR No. 85, MHWCAO-15-01

pp 19431-19464), both titled *Corrective Action for Releases From Solid Waste Management Units at Hazardous Waste Management Facilities*, as amended in the Federal Register dated October 7, 1999 (64 FR No. 194, pp 54604-54607).

A. Groundwater Corrective Measures Approval

1. Approval Process

- a. DEQ shall select groundwater corrective measure(s) for the Facility. DEQ will base its selection, at a minimum, on protection of human health and the environment, including site-specific human and ecological receptors, existing law and regulations, and applicable guidance. The corrective measures(s) and justification for selection of the corrective measure(s) will be documented in a Statement of Basis.
  - i. DEQ may, as it deems necessary, select a groundwater corrective measure(s) from the Groundwater CMS, reject any alternative in the Groundwater CMS, or prescribe a different remedial alternative or corrective measure(s) performance standard.
- b. Following DEQ's issuance of the Statement of Basis, DEQ will conduct a minimum forty-five (45) day public comment period, in accordance with subsection D of Section X: *Public Participation*. The public will be invited to comment on DEQ's proposed groundwater corrective measure(s) and its accompanying environmental assessment. DEQ will, at a minimum, issue a public notice in a major local newspaper to notify the public of the comment period. DEQ will also make available to the public the Statement of Basis describing the proposed selection of groundwater corrective measure(s) and the rationale and basis for such corrective measure(s).
  - i. DEQ will consider public comments submitted, including any comments that may be submitted by LPI, regarding the proposed groundwater corrective measure(s). DEQ will notify LPI of any public comments it receives that causes DEQ to reconsider its selection of corrective measures set forth in the Statement of Basis.
- c. After the public comment period is closed, DEQ shall select the groundwater corrective measure(s) to be implemented at the Facility and notify LPI of DEQ's decision in a Final Determination letter. The Final Determination letter will describe the rationale and basis for the corrective measure(s) selected.
- d. DEQ's Final Determination letter, Statement of Basis, and Response to Comments on the selected corrective measure(s) will constitute the Decision Document.
- e. Within ninety (90) calendar days after receipt of DEQ's Decision Document, LPI shall demonstrate financial assurance and liability insurance coverage in

accordance with Section XII: *Financial Assurance* for implementation through to completion of the CMI Work Plan for groundwater corrective measure(s). The demonstration must include detailed written cost estimate(s) for the Work to be performed. Financial assurance, liability coverage, and cost estimates must be in accordance with Section XII: *Financial Assurance*.

- f. DEQ shall not reopen the Decision Document, unless:
  - i. DEQ becomes aware of information not available to it at the time the Decision Document was issued that in its judgment demonstrates the selected corrective measure(s) will not achieve the goal of preventing, mitigating, and/or remediating releases of hazardous wastes or hazardous constituents at or from the Facility to protect human health or the environment;
  - ii. The selected corrective measure(s) does not meet standards and time periods specified in the Decision Document;
  - iii. DEQ determines that data or information it used as a basis for selection of a corrective measure(s) in the Decision Document was incorrect or otherwise not sufficient for remedy selection, or analytical data was not adequately validated and, as a result the selected corrective measure(s) for groundwater will not achieve the goal of preventing, mitigating, and/or remediating releases of hazardous wastes or hazardous constituents at or from the Facility to protect human health or the environment; or
  - iv. Both Parties agree to reopen the Decision Document.
- g. DEQ will provide advance written notice to LPI a minimum of thirty (30) days prior to reopening the Decision Document. LPI shall have an opportunity to confer with DEQ and present facts and information to DEQ that may be pertinent to DEQ's decision to reopen the Decision Document.
- h. Any reopening of the Decision Document is subject to the review and comment provisions set forth in Section X: *Public Participation*.

B. Corrective Measures Implementation (CMI)

1. Groundwater CMI Work Plan

a. Draft Groundwater CMI Work Plan

Upon receipt of the Decision Document, LPI shall, within ninety (90) calendar days, prepare and submit a Groundwater CMI Work Plan, unless an alternative schedule is approved by DEQ.

b. Work Plan Elements

The Groundwater CMI Work Plan should address the elements listed in Attachment E and subparagraph B.1.c, below. LPI should provide written justification for any omissions or material deviations from those elements. The Work Plan should also include changes, if any, to the existing groundwater monitoring system and/or monitor well locations that will result from construction of a building in the area of the closed Surface Impoundment. The CMI Work Plan will replace the existing long-range groundwater monitoring program.

c. Institutional and Land Use Controls

LPI shall include the following institutional and land use controls in the CMI Work Plan, with schedules for implementation. With DEQ approval, alternative institutional and land use controls may replace requirements in this section.

i. Deed Notices

LPI shall place a notation on all instruments of conveyance such as deeds or contracts for deeds for the Facility. The notation must include the following:

1. Notice provisions to subsequent purchasers and lessees that the Facility has been used to manage and dispose of hazardous waste, and, as applicable, use of the land is restricted;
2. Notice that any DEQ-required institutional or land use control or condition on the land must be maintained unless and until DEQ approves their modification or termination in writing;
3. As applicable, notice that any DEQ-required engineering controls must be maintained for the duration of required remediation unless DEQ approves their modification or termination in writing;
4. Notice of any restrictions placed on the Facility pursuant to subparagraph B.1.c.ii., below. Such notice must include a precise statement of the Parties' intentions with regard to the scope and duration of the restrictions. Where applicable, such notice must also include a statement that particular restrictions placed on the Facility "run with the land"; and
5. Notice, in detailed and understandable language, specifying the activities and uses that will be allowed and the specific activities and uses that will be prohibited.

ii. Deed Restrictions

LPI shall place a restriction on the deed that includes the following:

1. A requirement for notification to be sent by the owner of the Facility to purchasers, lessees, and tenants of the Facility disclosing the existence of residual chemicals of concern;
2. A requirement that the Facility's owner and successors and assigns give notice in all deeds, mortgages, leases, subleases, and other agreements transferring ownership or operation of the Facility that, as applicable, there are residual chemicals of concern on the Facility;
3. A requirement for ten (10) days advance notice to DEQ of any sale, lease, or other conveyance of ownership or operation of the Facility;
4. A requirement for notice in the deed notifying prospective purchasers that the Facility has been used to manage and dispose of hazardous waste, and that, as applicable, its use is restricted (notice must specify the restricted use); and
5. Restriction of the property to land uses selected as part of the corrective measure(s).

Should the property be used for purposes other than the land uses selected as part of the corrective measure(s), the owner at the time of such change in use must ensure the property is reevaluated to determine whether additional remediation is needed to provide an adequate level of protection to human health and the environment and ensure that any necessary remediation takes place.

iii. Survey Plat for Surface Impoundment

No later than sixty (60) days after DEQ approval of completion of corrective measure(s) set forth in subparagraph B.4.b., below, or such other time requested by LPI as may be approved by DEQ, LPI shall submit to the local zoning authority or the authority with jurisdiction over local land use, to DEQ, and to the county planner or equivalent, a survey plat indicating the location and dimension of the closed Surface Impoundment with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a professional land surveyor. The plat must be filed with the local zoning authority or the authority with jurisdiction over local land use and must contain a note prominently displayed which states the owner's or operator's obligation, to restrict the use of Surface

Impoundment area to its current commercial/industrial use unless/until such time as DEQ approves another use in writing. . The plat and restriction notice must also be attached to all instruments of conveyance such as deeds or contracts for deeds.

iv. Notice to Government Authority

LPI shall provide notice to DEQ within ten (10) days prior to completion of any sale, lease, or other conveyance of ownership or operation of the Facility.

2. Implementation of the Groundwater CMI Work Plan

- a. Upon DEQ approval of the Groundwater CMI Work Plan, LPI shall implement the approved Groundwater CMI Work Plan in accordance with the schedule specified therein. LPI shall notify DEQ Project Manager by electronic mail no less than seven (7) calendar days prior to initiating corrective measure activities.
- b. LPI shall give notice to DEQ as soon as possible of any proposed changes, deletions or additions to the CMI Work Plan. Such changes, deletions, or additions are subject to DEQ approval.

DEQ may require LPI to submit an amended CMI Work Plan to DEQ for approval. If required, the amended CMI Work Plan must include, but not be limited to, a description of the proposed changes to the Groundwater CMI Work Plan and justification for the change(s).

- c. Changes to the selected corrective measure(s) after issuance of the Decision Document may be made by LPI upon written approval from DEQ. DEQ may determine that additional public participation is necessary if proposed changes to the selected corrective measure(s) are substantial.
- d. LPI shall implement institutional and land use controls as set forth in the approved CMI Work Plan in accordance with the schedule specified therein.

3. Completion of Groundwater Corrective Measures

a. Groundwater CMI Certification Report

LPI shall prepare and submit a Groundwater CMI Certification Report to DEQ within sixty (60) calendar days of completion of corrective measures, including validation of all analytical data. The Groundwater CMI Certification Report must contain the following information, at a minimum:

- i. A description of all corrective measures completed;
- ii. Summaries of results and documentation of attainment of

performance requirements;

- iii. Summaries of any schedule or other problems encountered;
- iv. Summaries of accomplishments and/or effectiveness of corrective measures; and
- v. Certification that corrective measures have been completed in accordance with the approved CMI Work Plan. The certification must be signed by LPI and by an independent, registered professional engineer(s) registered in Montana and skilled in the appropriate technical discipline(s). Documentation supporting the independent qualified professional engineer(s) certification must be furnished to DEQ upon request until LPI is released from the financial assurance requirements for corrective action.

b. DEQ Approval of the Groundwater CMI Certification Report

The Groundwater CMI Certification Report must be approved in writing by DEQ. DEQ shall review the Groundwater CMI Certification Report and shall notify LPI in writing of its decision. If DEQ determines that the CMI Certification Report is not approved it shall notify LPI in writing of any deficiencies and specify a due date for submission of a revised report.

4. Facility-Wide Corrective Measures Completion Approval

a. Public Comment for Facility-Wide Corrective Measures Completion

The Soil CMI Completion Certification Report was approved by DEQ on April 7, 2011. Following DEQ's approval of the Groundwater CMI Certification Report, DEQ will conduct a public comment period, in accordance with Section X: *Public Participation*. DEQ will issue and make available to the public for review and comment a Fact Sheet describing the completion of both soil and groundwater corrective measure(s) at the Facility, and both the Soil and Groundwater Completion Certification Reports.

b. DEQ Decision on Facility-Wide Corrective Measures Completion

DEQ will consider public comments submitted, including any comments submitted by LPI, regarding completion of both soil and groundwater corrective measure(s). DEQ will notify LPI of any public comments it receives that causes DEQ to reconsider its approval of the Groundwater and/or Soil CMI Certification Reports. After the public comment period is closed, DEQ shall notify LPI in writing of DEQ's decision with respect to its approval of Facility-wide corrective measures completion. The notification will include DEQ's response to all significant comments made during the public comment period. DEQ's final approval of the groundwater and soil CMI Certification Reports shall not be subject to reopening unless

information or data not available at the time DEQ issued its final approval demonstrates that the implemented corrective measures are not protective of human health and/or the environment.

C. Agency Approvals

1. DEQ will provide LPI with its written approval, approval with conditions and/or modifications, disapproval, or disapproval with comments, for any work plan, report, specification, or schedule submitted pursuant to or required by this Order. DEQ will provide a detailed statement of reasons for any approval with conditions and/or modifications, disapproval or disapproval with comments.
2. LPI shall revise any work plan, report, specification, or schedule after resolution of DEQ's written comments. LPI shall submit to DEQ any revised submittals in accordance with the due date specified by this Order, unless DEQ approves an alternative schedule. Revised submittals are subject to DEQ approval, approval with conditions and/or modifications, disapproval, or disapproval with comments.
3. Upon receipt of DEQ's written approval, LPI shall commence work and implement any approved work plan in accordance with the schedule and provisions contained therein.
4. Any DEQ-approved report, work plan, specification, or schedule shall be deemed incorporated into this Order. Prior to this written approval, no work plan, report, specification, or schedule shall be construed as approved and final. Oral advice, suggestions, or comments given by DEQ representatives will not constitute an official approval, nor shall any oral approval or oral assurance of approval be considered binding.

D. Reportable Releases

1. Releases that occur at any time within the Facility boundaries which may present an imminent, potential or existing hazard to human health or the environment must be reported to DEQ, including those Releases that require reporting under the Comprehensive Environmental Cleanup and Responsibility Act (§75-10-701, et seq., MCA); Montana Hazardous Waste Act (§75-10-401, et seq., MCA); Montana Solid Waste Management Act (§75-10-201, et seq., MCA); Montana Underground Storage Tank Act (§75-11-501, et seq., MCA); and the Water Quality Act (§75-5-101, et seq., MCA). Any such Releases must be remediated to DEQ approved risk-based levels that are protective of human health and the environment. Montana numeric water quality standards in effect at the time of clean-up of the Release, such as those contained in Circular DEQ-7, as may be amended, revised or replaced in the future, shall be used for groundwater and surface water.
2. Releases not remediated in a timely fashion may be classified by DEQ as a new SWMU or a new AOC and will be required to follow the corrective action requirements of Section VIII.E of this Order.

E. New SWMUs and AOCs– Notification and Assessment Requirements

1. Notification

LPI shall notify DEQ in writing within fifteen (15) calendar days of discovery of any new SWMU or AOC. The notification must include, at a minimum, the following:

- a. The location of the SWMU or AOC, as applicable;
- b. The available information pertaining to the nature of the wastes, including hazardous constituents, at the SWMU or AOC, as applicable;
- c. The extent and magnitude of the release, to the extent known at the time of the notification; and
- d. The media affected.

2. Assessment Report

If further investigation of a newly identified SWMU or AOC is required by DEQ, LPI must prepare and submit to DEQ, within sixty (60) calendar days of DEQ request, a written assessment report, unless an alternative schedule is approved by DEQ. At a minimum, this assessment report must include the following information:

- a. The location on a topographic map of appropriate scale as required under 40 CFR 270.14(b)(19);
- b. Designation of the type and function of the SWMU or AOC;
- c. General dimensions, capacities, and structural description (including any available plans/drawings);
- d. Dates of operation;
- e. Specification of all wastes (including any available data on hazardous constituents) that have been managed at the location; and
- f. All available information pertaining to any release of hazardous waste or hazardous constituents (including ground water, surface water, and soil analytical results).

3. DEQ Action

- a. Based on the results of the assessment report, DEQ will determine whether there is a need for further investigations of the SWMU or AOC. If DEQ determines that additional investigation is needed, within 90-days after notification of DEQ's determination, LPI will be required to prepare an RFI Work Plan for the SMWU or AOC as outlined in Attachment B and follow

subsequent corrective action requirements as outlined in Attachments C, D, and E if DEQ deems it necessary.

F. Existing SWMUs and AOCs – Notifications

1. Notification

Within fifteen (15) calendar days after discovery, LPI must notify DEQ in writing of any newly discovered Release(s) of hazardous waste or hazardous constituents at previously identified SWMUs and AOCs identified in Attachment A discovered during the course of ground water monitoring, field investigations, environmental audits, or other means. The newly discovered Release may be from SWMUs and AOCs identified in Attachment A which are completed or for which further investigation and/or corrective action was not previously required. The notification must include, at a minimum, the following:

- a. The location of the SWMU or AOC at which the Release was discovered;
- b. The available information pertaining to the nature of the wastes, including hazardous constituents, at the SWMU or AOC;
- c. The known extent and magnitude of the Release; and
- d. The media affected.

2. DEQ Action

- a. If DEQ determines that further investigation of the existing SWMU or AOC is needed, within 90-days after notification of DEQ's determination, LPI shall prepare an RFI Work Plan as outlined in Attachment B and follow subsequent corrective action requirements as outlined in Attachments C, D, and E if DEQ deems it necessary.
- b. If DEQ requires further investigation and LPI is currently implementing an RFI Work Plan, the newly identified Release may be included in that RFI Work Plan. LPI shall prepare an addendum to the RFI Work Plan for investigation of the newly identified Release from an existing SWMU or AOC. The addendum must meet the requirements of Attachment B and follow subsequent corrective action requirements as outline in Attachments C, D, and E if DEQ deems it necessary.

G. Deferred Units

1. Notification

LPI shall notify DEQ in writing at least ninety (90) days prior to Facility closure or any construction activity that would allow for safe access to subsurface soil at any Deferred Unit. The notification must include, at a minimum, the following:

- a. The location of the Deferred Unit;
- b. The available information pertaining to the nature of the wastes, including hazardous constituents, at the Deferred Unit;
- c. The extent and magnitude of the Release, to the extent known at the time of the notification; and
- d. The media affected.

## 2. Assessment Report

If further investigation of a Deferred Unit is required by DEQ, LPI must prepare and submit to DEQ, within sixty (60) calendar days of DEQ's request, a written assessment report, unless an alternative schedule is approved by DEQ. At a minimum, this assessment report must include the following information:

- a. The location on a topographic map of appropriate scale as required under 40 CFR 270.14(b)(19);
- b. Designation of the type and function of the Deferred Unit;
- c. General dimensions, capacities, and structural description (including any available plans/drawings);
- d. Dates of operation;
- e. Specification of all wastes (including any available data on hazardous constituents) that have been managed at the location; and
- f. All available information pertaining to any Release of hazardous waste or hazardous constituents (including groundwater, surface water, and soil analytical results).

## 3. DEQ Action

- a. Based on the results of the assessment report, DEQ will determine whether there is a need for further investigations of the Deferred Unit. If DEQ determines that additional investigation is needed, within 90-days after notification of DEQ's determination, LPI will be required to prepare an RFI Work Plan for the Deferred Unit as outlined in Attachment B and follow subsequent corrective action requirements as outlined in Attachments C, D, and E if DEQ deems it necessary.

## H. New Detections in Analytical Results

### 1. Notification

During activities undertaken as part of any future investigation, LPI shall notify DEQ within fifteen (15) calendar days after LPI's receipt or its representative's receipt of analytical results that detect any hazardous waste or hazardous constituent that were previously not detected at the Facility. The new detections may be from either existing SWMU's or AOCs or previously unidentified sources.

### 2. DEQ Action

DEQ may require further investigation of the new detections reported.

## I. Additional Work

1. Based upon new information and/or changed circumstances, LPI may propose that certain tasks, including investigatory work, engineering evaluations, or procedure/methodology modifications, are necessary or warranted in addition to or in lieu of the tasks included in any DEQ approved work plan. DEQ may determine, based upon new information not available at the time it approved the Work Plan and/or changed circumstances from the date the Work Plan was approved, that such additional work is necessary in order to ensure completion of the Work in accordance with the standards and/or schedule under an approved Work Plan.
2. If DEQ determines under paragraph I.1, above, that it is necessary for LPI to perform additional work, DEQ shall specify in writing the technical support and other basis for its determination.
3. Within thirty (30) days after receipt of such determination, LPI shall have the opportunity to meet and/or confer with DEQ to discuss the need for and scope of any Additional Work proposed by LPI or required by DEQ.
4. If required by DEQ, LPI shall submit for approval a work plan for Additional Work. Additional Work must follow the appropriate requirements for facility-wide corrective action as set forth in this Order and, as applicable, Attachments B through E. Such work plan(s) shall be submitted within ninety (90) calendar days after receipt of DEQ's final written determination that Additional Work is approved or required to be performed (as the case may be) or according to an alternative schedule in the work plan approved by DEQ.
5. Upon approval of a work plan modified to reflect Additional Work, LPI shall implement the work plan in accordance with the schedule and provisions contained therein.

J. Facility Project Management

1. All Work performed pursuant to this Order shall be under the direction and supervision of a professional engineer registered in Montana, hydrogeologist, geologist, or environmental scientist, with expertise in hazardous waste site investigations and remediation. This person shall have the technical expertise sufficient to perform adequately and/or direct all aspects of work for which he or she is responsible.
2. If an outside contractor/consultant is used to perform any tasks required in this Order, LPI shall notify DEQ in writing of the name, title, and qualifications of the engineer, hydrogeologist, geologist, or environmental scientist and of any contractors and/or consultants LPI then plans to use in carrying out the terms of this Order. DEQ must be notified and the above required information provided within fourteen (14) days prior to a change in the outside contractor/consultant.

IX. **QUALITY ASSURANCE and MONITORING WELL REQUIREMENTS**

A. Quality Assurance

1. LPI shall maintain a consistent sampling and analysis program that ensures reliable monitoring results. All sampling and analysis activities undertaken pursuant to this Order must follow DEQ-approved quality assurance, quality control, and chain-of-custody procedures. Quality assurance, quality control, and chain of custody procedures must be detailed in a facility-specific quality assurance and sampling and analysis plan (QAP/SAP) and include the elements set forth in paragraph 4.2 of Attachment B (*Scope of Work – RFI Work Plan*). The QAP/SAP must be included or referenced in all work plans where sampling, monitoring, and analytical activities will take place. Updates to the QAP/SAP must be made as necessary and approved by DEQ.
2. All work plans required under this Order shall include data quality objectives for each data collection and analytical activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended use(s).
3. LPI shall require that its consultant or contract laboratories obtain high quality data. LPI shall require that laboratories used by LPI for analysis perform such analysis according to the latest approved edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846 Third Edition as amended by Update One, July 1992), or other methods deemed satisfactory to DEQ. If methods other than SW-846 methods are to be used, LPI shall submit all alternative protocols to DEQ for approval at least forty-five (45) calendar days prior to the commencement of analysis. DEQ may reject any data that does not meet the requirements of the approved work plan or analytical methods and may require resampling and additional analysis.

4. LPI shall require that laboratories it uses for analyses participate in a QA/QC program equivalent to that followed by EPA. Upon request by DEQ, LPI shall submit the laboratory's Quality Assurance Plan and the name of a contact person for any laboratory used for analyses.

B. Monitoring Well Requirements

Monitoring wells must be maintained in operational condition. LPI must notify DEQ in writing within ten (10) days after discovery that a well is no longer functioning properly. Written approval is required from DEQ prior to abandonment, replacement, and/or correction of improperly operating well(s). Monitoring well caps must be locked and secure when wells are not being sampled or maintained.

X. **PUBLIC PARTICIPATION**

- A. LPI and DEQ shall ensure adequate public notice and opportunity for public comment pursuant to 40 CFR 265.121(b), incorporated by reference in ARM 17.53.801.
- B. LPI must maintain an updated mailing list of the affected community and other stakeholders.
- C. LPI must provide to DEQ a current name and telephone number of a person who may be contacted and is responsible for providing information concerning implementation of this Order and the Facility to the public.
- D. LPI must maintain a publicly-accessible information repository for the documentation record (such as in a local town hall or public library) on the Facility-specific corrective action program, including the Order, approved work plans, and other reports.
- E. All material for public release shall be submitted by LPI to DEQ for review at least thirty (30) days prior to public release. LPI shall provide information to the public and conduct public activities following receipt of DEQ approval.
- F. In accordance with the procedures set forth in 40 CFR 265.121(b), incorporated by reference in ARM 17.53.801, DEQ will provide the public an opportunity to review and comment on the following:
  1. The Groundwater Corrective Measures Study Report and DEQ's proposed remedy selection, as described in Section VIII.A: *Groundwater Corrective Measures Approval*.
  2. Any additional Groundwater Corrective Measures Study Reports and/or proposed remedy selections based on activity at newly identified SWMUs and AOCs as described in Section VIII.E., and Deferred Units as described in Section VIII.G.
  3. The Facility-Wide Completion Certification Reports for soil and groundwater and a Fact Sheet describing the completion of both soil and groundwater

corrective measures, as described in Section VIII.B.4: *Facility-Wide Corrective Measures Completion*.

## **XI. PROGRESS REPORTS**

- A. Quarterly Progress Reports deliverable pursuant to this Order must be sent to DEQ no later than the fifteenth day of the month after each calendar quarter (e.g. April 15, July 15, October 15, and January 15). DEQ reserves the right to require Progress Reports on a more or less frequent basis. Progress Reports shall, at a minimum:
1. Describe the actions, progress, and status of projects that have been undertaken pursuant to this Order;
  2. Identify any requirements under this Order that were not completed in accordance with the approved schedule, and problem areas or anticipated problem areas affecting compliance with the Order;
  3. Describe projects completed during the quarter, as well as the activities scheduled for the next quarter;
  4. Describe and estimate the percentage of the activities completed;
  5. Include a description and summaries of all findings;
  6. Describe actions being taken to address and rectify problems, if applicable;
  7. Identify any changes in key personnel during the reporting period; and
  8. Include copies of the results of sampling and tests conducted and other data generated pursuant to work performed under this Order since the last Progress Report. LPI may also submit data that has been validated and confirmed by LPI to supplement any prior submitted data.

## **XII. FINANCIAL ASSURANCE**

### **A. General Requirements**

1. In accordance with 40 CFR 264.101, incorporated by reference in ARM 17.53.801, LPI shall provide financial assurance and liability coverage for completion of groundwater corrective measures as set forth in Section VIII. Financial assurance and liability coverage may be required by DEQ for new SWMUs and AOCs pursuant to Section VIII.E., the existing SWMUs and AOCs pursuant to Section VIII.F., the Deferred Units pursuant to Section VIII.G., or for Additional Work pursuant to Section VIII.I.
2. In order to secure completion of the Work in accordance with this Order, LPI shall secure financial assurance for the benefit of DEQ. The financial assurance requirements for purposes of this Order are as stipulated in 40 CFR 264.140,

incorporated by reference in ARM 17.53.801, and as set forth in this Section XII. LPI shall demonstrate financial assurance for each phase of corrective action in accordance with Attachment F: *Compliance Schedule* and Section VIII: *Work to be Performed*. Respondent shall establish financial assurance in an amount at least equal to a cost estimate prepared in accordance with paragraph B, below, and approved by DEQ.

3. LPI shall comply with the requirements of 40 CFR 264.148, incorporated by reference in ARM 17.53.801, with regard to any incapacity of LPI, Guarantors, or Financial Institutions to provide financial assurance.
4. DEQ may modify the requirements of Section XII in the event DEQ incorporates changes to ARM, Title 17, Chapter 53, Subchapter 8 after the Effective Date of this Order that make such modification appropriate.
5. For purposes of this Order, "affiliate" shall mean "(1) any entity that shares common ownership or common subsidiaries with LPI; (2) any entity in which LPI owns voting stock; or (3) any entity that owns voting stock in LPI."
6. For purposes of this Order, "related party" shall mean "(1) affiliate; or (2) any entity that exercises control or significant influence over the cash management or operating policies of the LPI."
7. For purposes of this Order, "net cash provided by operating activities" shall mean "the net result of all adjustments to reconcile net income to net cash provided by operating activities, determined on a consolidated basis, and as accounted for on the independently audited, Consolidated Statements of Cash Flows."
8. For purposes of this Order, a "substantial business relationship" shall be as defined in 40 CFR 264.141(h), as incorporated by reference in ARM 17.53.801.

B. Estimated Cost of the Work

1. LPI shall submit to DEQ detailed written estimates, in current dollars, of the cost of hiring a third party to perform the Work to be Performed under this Order (hereafter "Estimated Cost of the Work"). The Estimated Cost of the Work shall account for the total costs of the work activities that they cover, as described in Section VIII, including any necessary long term costs, such as operation and maintenance costs and monitoring costs. A third party who (i) is neither a parent nor a subsidiary of LPI and (ii) does not share a common parent or subsidiary with LPI. The cost estimates shall not incorporate any salvage value that may be realized from the sale of wastes, facility structures or equipment, land or other assets associated with the facility.
2. Within sixty (60) days after DEQ notifies LPI of its selection of the Groundwater Corrective Measures under Section VIII.A, LPI shall submit to DEQ for review and approval an initial estimated cost, in current dollars, of the Work to Be Performed

which covers Groundwater Corrective Measures Implementation under Section VIII.B.

3. Concurrent with the submission of any additional Work Plan(s) that may be required under Section VIII: *Work To Be Performed*, LPI shall submit a revised Estimated Cost of the Work to include the cost of the Work to be performed under such additional Work Plan(s).
4. LPI shall annually adjust the Estimated Cost of the Work for inflation within thirty (30) days after the close of LPI's fiscal year until the Work required by this Order is completed. In addition, LPI shall adjust the Estimated Cost of the Work if DEQ determines that any additional Work is required, pursuant to Section I of Section VIII: *Additional Work.*, or if any other condition increases the cost of the Work to be performed under this Order.
5. LPI shall submit each Estimated Cost of the Work to DEQ for review; DEQ will review each cost estimate and notify LPI in writing of DEQ's approval, disapproval, or modification of the cost estimate. If DEQ does not approve the submittal, DEQ shall specify in detail the basis for its disapproval or modification of the cost estimate.

C. Assurances of Financial Responsibility for Completing the Work

1. In order to secure the completion of the Work required under this Order, LPI shall establish and maintain financial assurance for the benefit of DEQ in the amount of the most recent Estimated Cost of the Work. LPI may use one or more of the financial assurance forms generally described in Paragraphs a-f below and as provided for in 40 CFR 264.140, as incorporated by reference in ARM 17.53.801. Any and all financial assurance instruments provided pursuant to this Order shall be satisfactory in form and substance as determined by DEQ.
  - a. A trust fund that satisfies the requirements at 40 CFR 264.145(a), as incorporated by reference in ARM 17.53.801. The trust fund shall be established for the benefit of DEQ, administered by a trustee who has the authority to act as a trustee under Federal or State law and whose trust operations are regulated and examined by a Federal or State agency, and that is acceptable to DEQ. The trust agreement shall provide that the trustee shall not refund to the grantor any amounts from the fund unless and until DEQ has advised the trustee that: (a) in accordance with subsection D, below, DEQ has agreed to reduce the amount of financial assurance required; (b) in accordance with subsection E, below, DEQ has agreed to an alternative form of financial assurance; or (c) in accordance with subsection F, below, DEQ has issued an Acknowledgement of Termination and Agreement to Record Preservation and Reservation of Rights pursuant to Section XXVI: *Termination and Satisfaction*.

- b. A surety bond guaranteeing performance of the Work in accordance with this Order, or guaranteeing payment at the direction of DEQ into a standby trust fund that, subject to 40 CFR 264.145(b)(3), as incorporated by reference in ARM 17.53.801, meets the requirements of the trust fund in Paragraph C.1.a above. A surety bond guaranteeing performance of the Work shall satisfy the requirements at 40 CFR 264.145(c), as incorporated by reference in ARM 17.53.801. In addition, the surety company issuing the bond must be an independent, third-party, and not an affiliate of LPI.
- c. An irrevocable standby letter of credit that satisfies the requirements of 40 CFR 264.145(d), as incorporated by reference in ARM 17.53.801. LPI may use one or more Letters of Credit, each of which must be irrevocable, automatically renewable, and payable at the direction of DEQ into a standby trust fund that, subject to 40 CFR 264.145(d)(3) as incorporated by reference in ARM 17.53.801, meets the requirements of the trust fund in Paragraph C.1.a above.
- d. A policy of insurance that satisfies the requirements of 40 CFR 264.145(e), as incorporated by reference in ARM 17.53.801. The policy of insurance must (i) provide DEQ with rights as a beneficiary which are acceptable to DEQ; and (ii) be issued by an insurance carrier that (a) has the authority to issue insurance policies in the applicable jurisdiction(s), (b) whose insurance operations are regulated and examined by a Federal or State agency, and (c) who is an independent third-party and not an affiliate of LPI. The insurance policy must be issued for a face amount at least equal to the current Estimated Cost of the Work to be performed under this Order, except where costs not covered by the insurance policy are covered by another financial assurance instrument, as permitted in Paragraph C.1 of this Section. The policy shall provide that the insurer shall make payments as DEQ shall direct in writing (i) to reimburse LPI for expenditures made by LPI for Work performed in accordance with this Order, or (ii) to pay any other person whom DEQ determines has performed or will perform the Work in accordance with this Order, up to an amount equal to the face amount of the policy.
- e. A corporate guarantee, executed in favor of DEQ by one or more of the following: (i) a direct or indirect parent company, or (ii) a company that has a "substantial business relationship" with LPI (as defined in 40 CFR 264.141(h) as incorporated by reference in ARM 17.53.801), to perform the Work in accordance with this Order or to establish a trust fund as permitted by Paragraph C.1.a above; provided, however, that any company providing such a guarantee shall demonstrate to the satisfaction of DEQ that it satisfies the financial test requirements of 40 CFR 264.145(f), as incorporated by reference in ARM 17.53.801, with respect to the Estimated Cost of the Work that it proposes to guarantee; or

- f. A demonstration by LPI that LPI meets the financial test criteria of 40 CFR 264.145(f), as incorporated by reference in ARM 17.5.801, with respect to the Estimated Cost of the Work, provided that all other requirements of 40 CFR 264.145(f) are satisfied.
2. If LPI seeks to establish financial assurance under Paragraphs 1.a, 1.b, 1.c, 1.d, or 1.e: Within sixty (60) days after DEQ notifies LPI of its selection of the Groundwater Corrective Measures under Section VIII, LPI shall submit draft financial assurance instruments and related documents to DEQ, concurrently with LPI's submission of the initial Estimated Cost of the Work, for DEQ's review and approval. Within thirty (30) days after DEQ's approval of both the initial Estimated Cost of the Work, and the draft financial assurance instruments, whichever date is later, LPI shall execute or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding in a form substantially identical to the financial assurance documents reviewed and approved by DEQ. LPI shall submit all executed and/or otherwise finalized instruments or other documents to DEQ within thirty (30) days after DEQ's approval of the initial Estimated Cost of the Work and the draft financial assurance instruments, whichever date is later.
3. If LPI seeks to establish financial assurance under Paragraph 1.f: Within sixty (60) days after DEQ has selected the Groundwater Corrective Measures to be Implemented under Section VIII, LPI shall submit to DEQ all documentation necessary to demonstrate that LPI satisfies the financial test criteria pursuant to Paragraph 1.f., concurrently with LPI's submission of the initial Estimated Cost of the Work. LPI's financial assurance shall be effective immediately upon DEQ's approval of the initial Estimated Cost of the Work and LPI's demonstration that LPI satisfies the financial test criteria pursuant to Paragraph 1.f., whichever date is later.
4. If LPI seeks to establish financial assurance by using a surety bond, or a letter of credit, LPI shall at the same time establish, and thereafter maintain, a standby trust fund, which meets the requirements of Paragraph C.1.a above, into which funds from the other financial assurance instrument can be deposited, if the financial assurance provider is directed to do so by DEQ, pursuant to Section C.14.
5. If at any time during the effective period of this Order LPI provides financial assurance for completion of the Work by means of a corporate guarantee or financial test pursuant to Paragraphs 1.e or 1.f above, LPI shall also comply with the other relevant requirements of 40 CFR 264.145(f), 40 CFR 264.151(f), and 40 CFR 264.151(h)(1), all incorporated by reference in ARM 17.53.801, relating to these methods, unless otherwise approved by DEQ, including but not limited to, (i) initial submission of required financial reports and statement from the guarantors' chief financial officer and independent certified public accountant; (ii) annual re-submission of such reports and

statements within ninety (90) days after the close of each of the guarantors' fiscal years; and (iii) notification of DEQ within ninety (90) days after the close of any of the guarantors' fiscal years in which any such guarantor no longer satisfies the financial test requirements set forth at 40 CFR Part 264.145(f)(1). LPI further agrees that if LPI provides financial assurance by means of a corporate guarantee or financial test, DEQ may request additional information (including financial statements and accountant's reports) from LPI or corporate guarantor at any time.

6. For purposes of the corporate guarantee or the financial test described in Paragraphs l.e and l.f above, references in 40 CFR 264.145 (f) to "the sum of current closure and post-closure costs and the current plugging and abandonment cost estimates" shall mean "the sum of all environmental remediation obligations" (including obligations under CERCLA, RCRA, UIC, TSCA and any other state or tribal environmental obligation) guaranteed by such company or for which such company is otherwise financially obligated in addition to the cost of the Work to be performed in accordance with this Order.
7. For purposes of the financial test and corporate guarantee described in subparagraphs C.l.e. and f, above, references in 40 CFR 264.145(f), as incorporated by reference in ARM 17.53.801, to a "special report from the owner's or operator's certified public accountant to the owner or operator" shall mean a "report of procedures and findings from LPI's (or, if applicable, LPI's corporate guarantor's) certified public accountant resulting from an agreed-upon procedures engagement performed in accordance with the American Institute of Certified Public Accountants Inc. ("AICPA") Statement on Auditing Standards No. 75, Engagements to Apply Agreed-Upon Procedures to Specified Elements, Accounts or Items of a Financial Statement, that describes the procedures performed and related findings, including whether or not discrepancies were found in the comparison of information included in the letter from LPI's (or LPI's corporate guarantor's) Chief Financial Officer (CFO) and LPI's (or LPI's corporate guarantor's) independently audited, year-end financial statements for the latest fiscal year, including all attachments. Where discrepancies exist between LPI's (or LPI's corporate guarantor's) CFO letter and LPI's (or LPI's corporate guarantor's) independently audited, year-end financial statements, the report of procedures and findings will provide a line-by-line reconciliation of each discrepancy."
8. LPI may combine more than one mechanism to demonstrate financial assurance for the Work to be performed in accordance with this Order. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit and insurance. If LPI uses a trust fund in combination with a surety bond or a letter of credit, it may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. [See 40 CFR 264.145(g)]

9. In the event that:
  - a. DEQ determines at any time that a financial assurance instrument provided pursuant to this Section XII is inadequate, or otherwise no longer satisfies the requirements set forth or incorporated by reference in this Section XII, whether such determination is based on an increase in the estimated cost of completing the Work, any financial reports or statements required pursuant to paragraph C.1, above, or any other information relevant to the financial condition of LPI, or any of its financial assurance providers, or any of its financial assurance providers, or
  - b. LPI becomes aware at any time of information indicating that any financial assurance instrument provided pursuant to this paragraph is inadequate or no longer satisfies the requirements set forth or incorporated by reference in this paragraph, whether due to an increase in the estimated cost of completing the Work, information in any reports or statement required pursuant to paragraph C.1, above, or any other information relevant to the financial condition of LPI or any of its financial assurance providers; then
  - c. LPI shall:
    - i. Within thirty (30) days after receipt of written notice of DEQ's determination, or as the case may be, within thirty (30) days after becoming aware of such information, shall prepare and submit for approval a revised or alternative form of financial assurance that satisfies all requirements set forth or incorporated by reference in the Section. Such revised or alternative form of financial assurance shall be submitted by LPI to DEQ for approval, and
    - ii. Within thirty (30) days after DEQ's approval of the revised or alternative draft financial assurance instrument(s), LPI shall establish the financial assurance in an amount at least equal to the detailed written cost estimate approved by DEQ.
10. LPI shall submit the original financial assurance instrument(s) established pursuant to this Order, including without limitation the original signed versions of all Trust Agreement(s), Letter(s) of Credit, Surety Bond(s), Insurance Policy(ies), and Written Guarantee(s), complete with all certifications, schedules, attachments, endorsements, amendments, and exhibits, to DEQ in accordance with Section XVII: *Notification*.
11. If, pursuant to subsection B, above, the annually adjusted cost estimate for completing the Work to be performed during the applicable phase of facility-wide corrective action in accordance with Section VIII: *Work to be Performed* exceeds the amount of financial assurance provided pursuant to subsection C, LPI shall, within thirty (30) days after submitting such adjusted cost estimate to DEQ, obtain and

present to DEQ for approval a revised form of financial assurance pursuant to subsection C that covers the adjusted cost estimate. Any, and all, revised financial assurance instruments provided pursuant to this paragraph shall satisfy all requirements set forth or incorporated by reference in this Section.

12. If, at any time, DEQ notifies LPI that the anticipated cost of completing the Work to be performed during the applicable phase of facility-wide corrective action in accordance with Section VIII: *Work to be Performed* has increased, LPI shall, within thirty (30) days thereafter, prepare and present to DEQ for approval a revised or alternative form of financial assurance pursuant to subsection C above that covers the adjusted cost estimate. Any and all revised or alternative financial assurance instruments provided pursuant to this paragraph shall satisfy all requirements set forth or incorporated by reference in this Section.
13. LPI's inability to secure financial assurance for the completion of Work to be performed during the applicable phase of facility-wide corrective action in accordance with Section VIII: *Work to be Performed* shall in no way excuse performance of any other requirements of this Order, including, without limitation, LPI's obligation to complete such Work in accordance with the terms of this Order.
14. Subject to the terms and conditions of paragraph C.12., Payment for or performance of the Work to be completed during the applicable phase of facility-wide corrective action shall, at DEQ's direction, become due as provided under the financial assurance instruments established under this Order upon DEQ's determination that LPI: (1) is in default under or violation of the terms of this Order; (2) is deficient or late in its performance of the Work in accordance with Section VIII: *Work to be Performed*; and (3) is implementing the Work in a manner that may cause endangerment to human health and the environment.
  - a. DEQ shall give LPI written notice of its determination no less than ten (10) business days before directing payment or performance under the financial assurance instruments established under this Order.
  - b. Within ten (10) business days after receiving such written notice from DEQ, LPI shall remedy the specified default or violation; provided, however, if remedying the specified default or violation within ten (10) business days is not feasible, LPI and DEQ shall confer and DEQ shall establish a reasonable period of time during which LPI must remedy the specified default or violation.
  - c. If LPI remedies the specified default or violation within the applicable period of time under subparagraph C.3.b., above, payment or performance under the financial assurance instruments established under this Order shall not be required.
  - d. If LPI fails to remedy the specified default or violation within the applicable period of time under subparagraph C.3.b., above, DEQ may direct payment for or performance of the Work to be completed during the applicable phase

of facility-wide corrective action as provided under the financial assurance instruments established under this Order.

- e. If, after reasonable efforts, DEQ is unable to secure payment for or performance of the Work to be completed during the applicable phase of facility-wide corrective action as provided under the financial assurance instruments established under this Order, then, upon receiving written notice from DEQ, LPI shall, within ten (10) business days thereafter, deposit into the standby trust fund, or into a newly created trust fund approved by DEQ, in immediately available funds and without setoff, counterclaim, or condition of any kind, a cash amount equal to the estimated cost of the remaining Work to be performed in accordance with this Order as of such date, as confirmed by DEQ.

15. LPI may invoke the procedures set forth in Section XXIV: *Dispute Resolution* to dispute DEQ's determination that any of the circumstances described in paragraph C.14 herein have occurred. Invoking the dispute resolution provisions shall not excuse, toll, or suspend the ability of DEQ to draw on the financial assurance instrument to fund a trust fund as provided for under paragraph C.14 herein, however DEQ will not direct the trustee of any such trust fund to make any payments from the trust fund pending resolution of the dispute.

D. Reduction in Financial Assurance

If LPI believes that the estimated cost to complete Work in accordance with Section VIII: *Work to be Performed* has diminished below the amount covered by the existing financial assurance instrument(s), LPI may submit a written proposal to DEQ to reduce the amount of financial assurance to an amount equal to the cost of the remaining Work to be performed in accordance with this Order.

1. LPI's written proposal shall specify the estimated cost of the Work to be performed in accordance with the requirements of subsection B, above, including the basis upon which the revised cost estimate was calculated.
2. The decision to approve LPI's written proposal and reduce the amount of financial assurance required under this Order shall be within DEQ's discretion and pursuant to 40 CFR Part 264 Subpart H, as incorporated by reference in ARM 17.53.801. DEQ shall notify LPI in writing of its decision regarding such proposal. LPI may reduce the amount of the financial assurance only after receiving DEQ's written decision to do so, and only in accordance with, and to the extent permitted, by such written decision.
3. In the event of a dispute, LPI may reduce the amount of the financial assurance required by this Order only in accordance with a final decision resolving such dispute under Section XXIV: *Dispute Resolution*.

E. Change of Form of Financial Assurance

For purposes of compliance with this Order, LPI may at any time submit a written proposal to DEQ to change the form of financial assurance to any other instrument provided for under subsection C above.

1. LPI's written proposal shall specify the estimated cost of the Work to be performed in accordance with the requirements of subsection B, above, and a detailed description of the proposed revised form of financial assurance in accordance with the requirements of subsection C above.
2. The decision to approve LPI's written proposal to change the form of financial assurance required under this Order shall be within DEQ's discretion and pursuant to 40 CFR, Part 264 Subpart H, as incorporated by reference in ARM 17.53.801. DEQ shall notify LPI in writing of its decision regarding such proposal. LPI may change its financial assurance only after receiving DEQ's written decision to do so, and only in accordance with, and to the extent permitted, by such written decision. LPI must ensure that there is no gap in financial assurance coverage resulting from any change in financial assurance instruments as required hereunder.
3. In the event of a dispute, LPI may change its financial assurance instrument(s) as required hereunder only in accordance with a final decision resolving such dispute under Section XXIV: *Dispute Resolution*.

F. Release of Financial Assurance

LPI shall be released from the requirement to maintain financial assurance under this Order at such time as DEQ and LPI have both executed an "Acknowledgement of Termination and Agreement to Record Preservation and Reservation of Right" pursuant to Section XXVI: *Termination and Satisfaction*. Upon joint execution of this acknowledgement, DEQ shall notify, in writing, LPI and the provider(s) of the financial assurance instrument(s) that LPI is released from all financial assurance obligations under this Order. The financial assurance provider(s) may be released from its obligations under the instrument(s) only upon such written notification from DEQ.

G. Liability Requirements

LPI shall demonstrate financial responsibility for bodily injury and property damage to third parties arising from corrective action activities at the Facility as required under Section VIII: *Work to be Performed* for sudden and non-sudden accidental occurrences. The financial responsibility requirements applying to LPI for purposes of liability coverage are as required and/or allowed in 40 CFR 264.147, incorporated by reference in ARM 17.53.801. Any and all financial responsibility instruments provided for purposes of demonstrating compliant financial responsibility for liability coverage shall comply in form and substance with 40 CFR 264.147, as incorporated by reference in ARM 17.53.801. Evidence of required liability coverage shall be submitted to DEQ for review and approval concurrent with evidence of financial assurance for completion of the Work as set forth in Section XII.B and Section XII.C of this Order.

1. The liability coverage for sudden and non-sudden occurrences arising solely from RFI, IM, CMS and/or CMI activities must consist of \$5 million per occurrence with \$10 million annual aggregate exclusive of legal defense costs. This coverage must be held separately from, and be in addition to, any insurance otherwise required by any other applicable section of 40 CFR 264, Subpart H, as incorporated by reference in ARM 17.53.801, with the exception of the Financial Test or Corporate (Third-Party) Guarantee set forth in subsection C above.

### **XIII. ON-SITE AND OFF-SITE ACCESS**

- A. Upon reasonable notice and at all reasonable times, DEQ, and/or any authorized DEQ representative, shall be authorized to enter the Facility during the effective dates of this Order for the purposes of: interviewing Facility personnel and contractors (to be coordinated with the Facility Project Manager) regarding information relevant to the implementation of this Order; inspecting records, operating logs, and contracts related to this Order; conducting such tests, sampling, or monitoring as DEQ deems necessary for the implementation of this Order; using sound recording, or other documentary type equipment, verifying the reports and data submitted to DEQ by LPI; and any other activities necessary to review properly the progress of LPI in carrying out the terms of this Order. If DEQ decides to use a camera, a Loveland confidential information form will be signed prior to use and DEQ will provide LPI copies of all photos obtained. DEQ acknowledges that its representatives must meet all of LPI's health, safety, security, and environment requirements for visiting personnel.
- B. LPI shall permit such persons to inspect and copy all files, photographs, documents, and other writings, including all sampling and monitoring data that pertain to Work undertaken pursuant to this Order. To the extent that such information is business confidential or proprietary, LPI shall so advise such persons in writing, and procedures as set forth at ARM 17.53.208 shall be followed. LPI may assert that certain documents, records and other information are privileged under the attorney-client privilege, the work-product protection or any other privilege recognized by federal or state law. If LPI asserts such a privilege in lieu of providing documents, it shall provide DEQ with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the contents of the document, record, or information; and (6) the privilege asserted by LPI. However, no data, final documents, reports, or other information required to be created or generated pursuant to this Order shall be withheld on the grounds that they are privileged.
- C. DEQ shall provide LPI with split samples of any samples taken by DEQ.
- D. To the extent that Work required by this Order, or by any approved Work Plans prepared pursuant hereto, must be done on property not owned or controlled by LPI, LPI shall use its best efforts to obtain site access from the present owner(s) of such property within thirty (30) days following approval of the Work Plan by DEQ.
  1. "Best efforts" as used in this Section shall include, at a minimum a certified letter (showing actual receipt) from LPI to the present owner(s) of such property

requesting the execution of reasonable access agreements to permit LPI and DEQ and their authorized representatives to obtain access to such property.

2. LPI shall submit copies of any fully executed access agreements to DEQ with the next following Quarterly Progress Report.
  3. In the event that agreements for access are not obtained within thirty (30) days after the date of the property owner's receipt of LPI's certified letter, LPI shall notify DEQ in writing within seven (7) days thereafter regarding both the efforts undertaken to obtain access and its failure to obtain such agreements. DEQ may, at its discretion, assist LPI in obtaining access.
- E. Nothing in this Section limits or otherwise affects DEQ's or EPA's right to Facility access and entry pursuant to applicable law, including MHTWA, RCRA, and CERCLA.
- F. LPI is not relieved of all responsibility to clean up a release that has migrated beyond the Facility boundary where off-site access is denied. On-site measures to address such off-site release will be determined on a fact-specific basis by DEQ after consultation with LPI. [See 264.101(c)]

#### **XIV. SAMPLING AND DATA/DOCUMENT AVAILABILITY**

- A. Unless notified by DEQ in writing, LPI shall submit to DEQ the results of sampling and/or tests or other data generated by, or on behalf of LPI, in Progress Reports and/or reporting requirements provided in the Corrective Measures Implementation Work Plan. In addition, LPI shall submit to DEQ the results of all validated and confirmed sampling and/or tests or other data generated by, or on behalf of LPI performed pursuant to this Order.
- B. LPI shall notify DEQ Project Manager by electronic mail at least seven (7) calendar days before conducting any well drilling, installation of equipment, or sampling. LPI shall provide a reasonable amount of, or allow DEQ or its authorized representatives to take, split samples of all samples collected by LPI pursuant to this Order.
- C. Except as noted below, LPI may assert a business confidentiality claim covering all or part of any information provided to DEQ or its representatives pursuant to this Order in accordance with ARM 17.53.208. Any assertion of confidentiality shall be substantiated by LPI when the assertion is made, or the right to assert the claim shall be waived. Information determined to be confidential shall be disclosed only to the extent permitted by ARM 17.53.208. If no confidentiality claim accompanies the information when it is provided, it may be made available to the public without further notice to LPI. Physical or analytical data either generated and/or submitted pursuant to this Order cannot be claimed confidential and/or privileged.

#### **XV. RECORD PRESERVATION**

- A. LPI shall retain, during the pendency of this Order and for a minimum of three (3) years after its termination pursuant to Section XXVI, pertinent data, records, and documents now in its possession or control or which come into its possession or control which apply or

pertain directly to this Order or to hazardous waste management and/or disposal at the Facility. LPI shall notify DEQ in writing ninety (90) days prior to the destruction of any such records, and shall provide DEQ with the opportunity to take possession of any such records. Such written notification shall reference the Effective Date, caption, and Corrective Action Order Number (MHWCAO-14-01) and shall be addressed to:

Director  
Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620

- B. LPI further agrees that within thirty (30) days after retaining or employing any agent, consultant, or contractor for the purpose of carrying out the terms of this Order, LPI will enter into an agreement with any such agents, consultants, or contractors whereby such agents, consultants, and/or contractors will be required to provide LPI a copy of all documents required by this Order to be submitted to DEQ.
- C. All documents pertaining to this Order shall be stored by LPI in a centralized location at the Facility or at another location identified by LPI to afford ease of access by DEQ or its representatives.

#### **XVI. PROJECT MANAGERS**

- A. On or before the Effective Date of this Order, DEQ and LPI shall designate Project Managers. Each Project Manager shall be responsible for overseeing the implementation of this Order. The DEQ Project Manager shall be DEQ's designated representative at the Facility. To the maximum extent possible, all communications between LPI and DEQ, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order, shall be directed to the Project Managers.

- B. DEQ project manager is:

Ann M. Kron  
Environmental Science Specialist  
Montana Department of Environmental Quality  
Waste and Underground Tank Management Bureau  
Permitting and Compliance Division  
P.O. Box 200901  
Helena, MT 59601-0901

- C. LPI Project Managers are:

Diana Grassel  
Loveland Products, Inc.  
1525 Lockwood Road  
Billings, MT 59101

Environmental Manager  
Loveland Products, Inc.  
3005 Rocky Mountain Avenue  
Loveland, CO 80538

- D. The parties agree to provide at least seven (7) calendar days' notice prior to changing Project Managers.
- E. The absence of DEQ's Project Manager or LPI's Project Manager shall not be cause for the stoppage of work.

**XVII. NOTIFICATION**

- A. Unless otherwise specified, reports, notices, approvals, disapprovals, or other submittals relating to or required under this Order shall be in writing and shall be sent to the parties' respective Project Managers.
- B. All deliverables described in Attachment F, including any addenda or supplements thereto submitted by LPI shall be certified by a responsible corporate officer of LPI or a duly authorized representative of such responsible corporate officer. A responsible corporate officer may include a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation. LPI may delegate this requirement to its Project Manager if a responsible corporate official provides DEQ a written declaration defining the scope of the Project Manager authority to act on behalf of the corporation.
- C. The certification required by subsection B above, shall be in the following form:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

**XVIII. DELAY IN PERFORMANCE/STIPULATED PENALTIES**

- A. Unless there has been a written modification by DEQ of a compliance date, a written modification by DEQ of an approved work plan condition, or excusable delay as defined in Section XXV: *Force Majeure*, LPI agrees to pay stipulated penalties as set forth below:

1. LPI agrees to pay to DEQ stipulated penalties in the amount of \$500 per day for each day for the following violations:
  - a. LPI fails to submit deliverables by the deadlines set forth in Attachment F (*Compliance Schedule*); and/or
  - b. LPI fails to meet deadlines as specified in Attachment F and/or paragraphs 4 and/or 5 of subsection VIII.H., *Additional Work*.
  - c. LPI fails to correct its actions by required deadline(s) set forth in a DEQ notice that LPI has failed to commence, perform, or complete tasks as specified in work plans and/or reports; and/or
  - d. LPI fails to notify DEQ of newly identified SWMUs/AOCs, hazardous constituents, or newly discovered releases as set forth in Attachment F (F.1) and paragraph 1 of subsection VIII.E.
  - e. LPI fails to notify DEQ of immediate or potential threats to human health and/or the environment.
2. DEQ retains discretion to reduce, waive or forgive any stipulated penalties that may be assessed under this Order.
3. Penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the day of correction of the violation. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Order.
4. All penalties owed to the State of Montana under this Section shall be due and payable within thirty (30) days after LPI's receipt from DEQ of a written demand for payment of the penalties, unless LPI invokes procedures for Dispute Resolution (Section XXIV) or Force Majeure (Section XXV) under this Order. Such a written demand from DEQ will describe the violation for which penalties are being assessed and will state the amount of penalties due.
5. All penalties shall be made payable by certified or cashier's check to DEQ of Environmental Quality and shall be remitted to:

Montana Department of Environmental Quality  
1520 E. Sixth Avenue  
P.O. Box 200901  
Helena, MT 59620-0901

- a. All such checks shall reference the name of the Facility, LPI's name and address, and DEQ Administrative Order Number of this action. Copies of all such checks and letters forwarding the checks shall be sent simultaneously to DEQ Project Manager.

- B. LPI may dispute DEQ's assessment of stipulated penalties by invoking the dispute resolution procedures under Section XXIV: *Dispute Resolution*. The stipulated penalties in dispute shall continue to accrue, but need not be paid, during the dispute resolution period. LPI shall pay stipulated penalties, if any, in accordance with the dispute resolution decision and/or agreement. LPI shall submit such payment to DEQ within seven (7) days after receipt of such resolution in accordance with paragraph A.5, above.
- C. Neither the invocation of dispute resolution nor the payment of penalties shall alter in any way LPI's obligation to comply with the terms and conditions of this Order.
- D. DEQ reserves its enforcement rights for any other violations of this Order that are not addressed in the stipulated penalties in this Section XVIII.

#### **XIX. RESERVATION OF RIGHTS**

- A. DEQ expressly reserves all rights and defenses that it may have, including the right: (i) to disapprove of Work by LPI that is not in compliance with this Order and (ii) to require additional work pursuant to subsection VIII.I.
- B. DEQ reserves all of its statutory and regulatory powers, authorities, rights, remedies, both legal and equitable, which pertain to LPI's failure to comply with any of the requirements of this Order, including the assessment of penalties under the MHWCA. Nevertheless, DEQ and the parties agree that any stipulated penalties assessed to and paid by LPI pursuant to Section XVIII: *Delay in Performance/Stipulated Penalties* shall preclude DEQ from pursuing any action for the same alleged violation.
- C. This Order shall not be construed as a covenant not to sue, release, waiver or limitation of any rights, remedies, powers and/or authorities, civil or criminal, which DEQ has under MHWCA, CECRA, or any other statutory, regulatory, or common law authority.
- D. Compliance by LPI with the terms of this Order shall not relieve LPI of its obligations to comply with RCRA or any other applicable local, state, or federal laws and regulations including, but not limited to, the Clean Water Act and Safe Drinking Water Act.
- E. Subject to the exclusive remedy of stipulated penalties for violations of the terms of this Order as provided in Section XVIII, *Delay in Performance Stipulated Penalties*, this Order shall not limit or otherwise preclude DEQ from taking additional action pursuant to §75-10-425, MCA, or any other applicable legal authorities, should DEQ determine that such actions are warranted.
- F. This Order is being issued in lieu of a Montana Hazardous Waste Permit and does not relieve LPI of any obligation to obtain and comply with other local, state, or Federal permits.
- G. In the event LPI fails to perform Work required pursuant to this Order, including the submittal of acceptable documents, after reasonable opportunity to remedy by LPI, DEQ reserves the right to perform any portion of the Work required of LPI as DEQ deems

necessary to protect human health and the environment, including drafting final work plans and other documents, which become binding on LPI upon notice by DEQ.

- H. DEQ reserves its right to seek reimbursement from LPI under all applicable statutes for such cleanup or additional costs that may be incurred by the State of Montana.
- I. Except as otherwise expressly provided in this Order, LPI reserves all of its rights and defenses under law and equity, including LPI's right to notice and hearing before the Board of Environmental Review or to judicial review and LPI's right to comment on, contest and/or appeal DEQ's remedy selection or other decisions under this Order.

## **XX. OTHER CLAIMS AND PARTIES**

Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity, against any person, firm, partnership, or corporation for any liability it may have arising out of or relating to the generation, storage, treatment, handling, transportation, release, management or disposal of any hazardous constituents, hazardous substances, hazardous wastes, hazardous materials, pollutants, or contaminants found at, on, or under, taken to or from, or migrating to, from, or through the Facility.

## **XXI. OTHER APPLICABLE LAWS**

LPI shall obtain or cause its representatives to obtain all permits and approvals necessary under applicable local, state, and Federal laws and regulations and shall otherwise comply with all applicable local, state, and Federal requirements.

## **XXII. INDEMNIFICATION OF THE STATE OF MONTANA**

- A. Neither the State of Montana nor its agencies, departments, agents, and employees shall be held out or construed to be a party to any contract entered into by LPI in carrying out activities pursuant to this Order.
- B. The State of Montana, or its agencies, departments, employees, and its agents shall not be liable for any injury or damages to persons or property resulting from acts or omissions of LPI or its contractor(s) in implementing the requirements of this Order, or any DEQ approved work plans or planning documents submitted pursuant to this Order.
- C. The State of Montana, or its agencies, departments, employees, and its agents shall not be considered agent, independent contractor, receiver, trustee and assign, in carrying out activities required by this Order.

## **XXIII. SUBSEQUENT MODIFICATION**

- A. This Order may only be modified or amended in writing, signed by authorized representatives of the Parties, and each modification shall be effective on the date on which it is signed by both Parties.

- B. Any reports, plans, schedules, and attachments required by this Order shall be incorporated into this Order upon written approval by DEQ.
- C. If DEQ determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste or hazardous constituents within and/or outside of the Facility, or have caused or may cause an imminent threat to human health or the environment; or if DEQ determines that LPI is not capable of undertaking any studies or corrective measures required pursuant to this Order, DEQ may order LPI to stop further implementation of this Order for such period of time as DEQ determines may be needed to abate any such release or threat and/or to undertake any action which DEQ determines is necessary to abate such release or threat.
- D. No informal advice, guidance, suggestions, or comments by DEQ regarding reports, plans, specifications, schedules, and any other writings submitted by LPI will be construed as relieving LPI of its obligations to obtain written approval if and when required by this Order.

#### **XXIV. DISPUTE RESOLUTION**

- A. DEQ and LPI shall work by consensus and when a dispute arises concerning specific activities or submittals required by this Order shall first attempt to resolve the matter informally.
  - 1. The remedy selected as set forth in section VIII may not be included in the formal dispute resolution process set forth in this Section XXIV; however LPI may choose to comment on the remedy selection through the public participation process. To ensure public comment and involvement on selection of remedy, DEQ shall proceed with remedy selection in accordance with Section VIII. LPI retains its rights to comment on, contest and/or appeal DEQ's remedy selection or other decisions under this Order.
- B. If no resolution is reached and LPI further objects or if LPI objects in whole or in part to any DEQ notice of disapproval, or other decision or directive made pursuant to this Order, LPI shall notify DEQ in writing of its objections within fourteen (14) calendar days after its receipt of DEQ's notification (the "review period"). LPI's notification must include the reasons for the objection, with any supporting documentation, and LPI's preferred alternate solutions.
- C. DEQ and LPI shall endeavor to meet promptly and work in good faith for a period of twenty-one (21) calendar days from DEQ's receipt of LPI's written notification of objection in an effort to reach a mutually agreeable resolution of the dispute (the "negotiation period"). If the dispute is resolved, LPI shall submit a revised submission (if any) or implement the agreed-upon action(s) (if any) in accordance with an agreed-upon schedule.
- D. If agreement is not reached within the negotiation period, DEQ shall, within fourteen (14) calendar days after the end of the negotiation period, provide a written statement of its decision and the reasons therefore to LPI signed by the Director of DEQ. Within fourteen (14) calendar days of receiving the written statement of decision from DEQ if LPI continues

to disagree with the decision, LPI may seek, by written request, a meeting with DEQ. If LPI requests such a meeting with DEQ, such request stays any enforcement actions, determinations of noncompliance and accrual of stipulated penalties pending LPI's meeting with DEQ and receipt of DEQ's final written decision.

- E. During the negotiation period as set forth in subsection C, above, and, if no agreement is reached during the negotiation period, until DEQ provides a written statement of its final decision pursuant to subsection D, above, LPI shall be excused from performing only the requirement under this Order that is specifically the subject of such dispute. DEQ's consideration of matters placed into dispute does not excuse, toll, or suspend any compliance obligation or deadline required pursuant to this Order that is not substantially affected by the outcome of the dispute. LPI shall take any actions required by this Order that DEQ determines are not substantially affected by the dispute.
- F. Notwithstanding the other provisions of this Order, any agreement or decision made by DEQ pursuant to this Section must be reduced to writing and be binding on the Parties. Such agreement or decision will be incorporated into this Order without further order or process.
- G. Nothing herein precludes LPI's right to notice and hearing before the Board of Environmental Review or to judicial review after attempting resolution pursuant to this Section XXIV. If LPI pursues such right to notice and hearing, such action stays any enforcement actions, determinations of noncompliance and accrual of stipulated penalties pending the final written decision of the Board of Environmental Review or court.

#### **XXV. FORCE MAJEURE**

LPI shall perform the requirements of this Order within the time limits set forth herein unless such performance is prevented or delayed by an event of force majeure, which is defined as any event such as war, riot, act of terrorism, labor strike, adverse weather conditions, or an act of God, over which LPI has little or no control and for which there is not a reasonably available remedy.

- A. If any event occurs or has occurred that may delay the performance of any obligation under this Order, whether or not caused by a force majeure event, LPI shall notify DEQ in writing within fourteen (14) calendar days after becoming aware of such event. Such notice shall include the reasons for the delay, the anticipated duration of the delay, all actions taken or to be taken to prevent or minimize the delay, and a schedule for the implementation of any measure to be taken to mitigate the effect of the delay.
- B. Failure to comply with the notice provision of this Section as to any individual event may, in DEQ's discretion, constitute a waiver of LPI's right to assert a force majeure claim as to that event.

#### **XXVI. TERMINATION AND SATISFACTION**

The provisions of this Order shall be deemed complete and this Order shall terminate upon the Parties' execution of an "Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights" ("Acknowledgment"). DEQ will prepare and sign the Acknowledgment

and provide to LPI for LPI's signature. The Acknowledgment will specify that LPI has demonstrated to the satisfaction of DEQ that the terms of this Order have been satisfactorily completed. LPI's execution of the Acknowledgement will affirm LPI's continuing obligation to preserve all records as required in Section XV: *Record Preservation*. LPI's execution of the Acknowledgement shall not limit or otherwise preclude DEQ from taking additional action pursuant to §75-10-425, MCA, or any other applicable legal authorities, should information or data not available at the time of the Acknowledgement cause DEQ to determine that such actions are necessary to protect human health or the environment.

**XXVII. SURVIVABILITY/PERMIT INTEGRATION**

- A. This Order replaces and supersedes any MHW A permit issued previous to the Effective Date of this Order.
- B. Except as otherwise expressly provided in this Section, this Order shall survive the issuance or denial of a MHW A permit for the Facility, and this Order shall continue in full force and effect after either the issuance or denial of such permit. Accordingly, LPI shall continue to be liable for the performance of obligations under this Order notwithstanding the issuance or denial of such permit.
- C. Subsequent to the Effective Date of this Order, DEQ may issue a MHW A Permit to LPI only upon good cause pursuant to the provisions of §75-10-406, MCA. If the Facility is issued a MHW A permit, and, to the extent this Order remains in effect after such issuance, such permit shall not contain any provision that conflicts or is inconsistent with any provision of this Order, unless it is expressly stated in such permit that such permit provision controls or supersedes such provision of this Order.

**XXVIII. EFFECTIVE DATE AND SIGNATURES**

The Effective Date of this Order shall be the date on which this Order is signed by both Parties, whichever is the last to sign.


**FOR THE MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY,**

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Tom Livers, Director  
Montana Department of Environmental Quality

**FOR LOVELAND PRODUCTS, INC.**

Date: 4/3/2019

By:   
Michael Williams  
(Print Name)  
Plant Manager  
(Title)

**ATTACHMENT A**

**SWMU and AOC Current Status Table**

**Site Location Map**

**Site Location Aerial Photograph**

**SWMU and AOC Location Map**

**Attachment A**  
**Loveland Products, Inc., Billings Montana**  
**Solid Waste Management Units and Areas of Concern**  
**Current Status**

Area	Name	Study Area	RFI Status	CMS Status	CMI Status
SA1-15	Soil Exceedance at SA1-15	1	C	C	C
AOC 5	Soil Pile Area	1	NFA		
SWMU 2	Old Wastewater Storage Tank	2	C	NFA	
SWMU 10a	Rail Track Pan 1	2	C	NFA	
SWMU 10b	Rail Track Pan 2	2	C	NFA	
AOC 2a	Tank Farm	2	C	NFA	
AOC 2b	Tank Farm	2	C	NFA	
AOC 8	Drum Storage Area	2	C	NFA	
AOC 9	Standing Liquid	2	C	NFA	
AOC 10	Stained Area	2	C	NFA	
SWMU 1	Wastewater Sump Building	3	C	NFA	
SWMU 4	Water Decanter Building	3	C	NFA	
SWMU 5	Water Treatment Building	3	C	NFA	
SWMU 11a	Boiler Blowdown Area	3	C	NFA	
AOC 6	Drum Storage Area	3	C	NFA	
AOC 14	Area West of Decanter Building	3	C	NFA	
SWMU 7	Ground Water	4	C	IP	
SWMU 8	Open Air Storage	5	D		
SWMU 13	Warehouse 2 Wastewater Collection Tank	5	D		
SWMU 15	Raildock Accumulation Area	5	D		
SWMU 16	New Shuttle Wash Sump	5	D		
AOC 4	Special Process Area	5	D		
AOC 3	Paved Area Below Storage Pad	IDS	NFA		
AOC 5 <sup>1</sup>	Soil Pile Area	IDS	NFA		
AOC 12	Coulson Ditch Breaches	NA	NFA		
SWMU 3	New Wastewater Storage Tank	NA	NFA		
SWMU 6	Surface Impoundment (evaporation ponds)	NA	C	C	C
SWMU 9	Crushed Bag Storage Area	NA	NFA		
SWMU 11b	Boiler Blowdown Area	NA	NFA		
SWMU 12	North Property Line Waste Area	NA	NFA		
SWMU 14	Sanitary Septic Drainfield System	NA	NFA		
AOC 1	Abandoned Injection Wells	NA	NFA		
AOC 7	Drum Storage Area	NA	NFA		
AOC 11	Stained Area	NA	NFA		
AOC 13	Railcar Waste Accumulation Area	NA	NFA		

<sup>1</sup> Remote soil pile east of AOC 5.

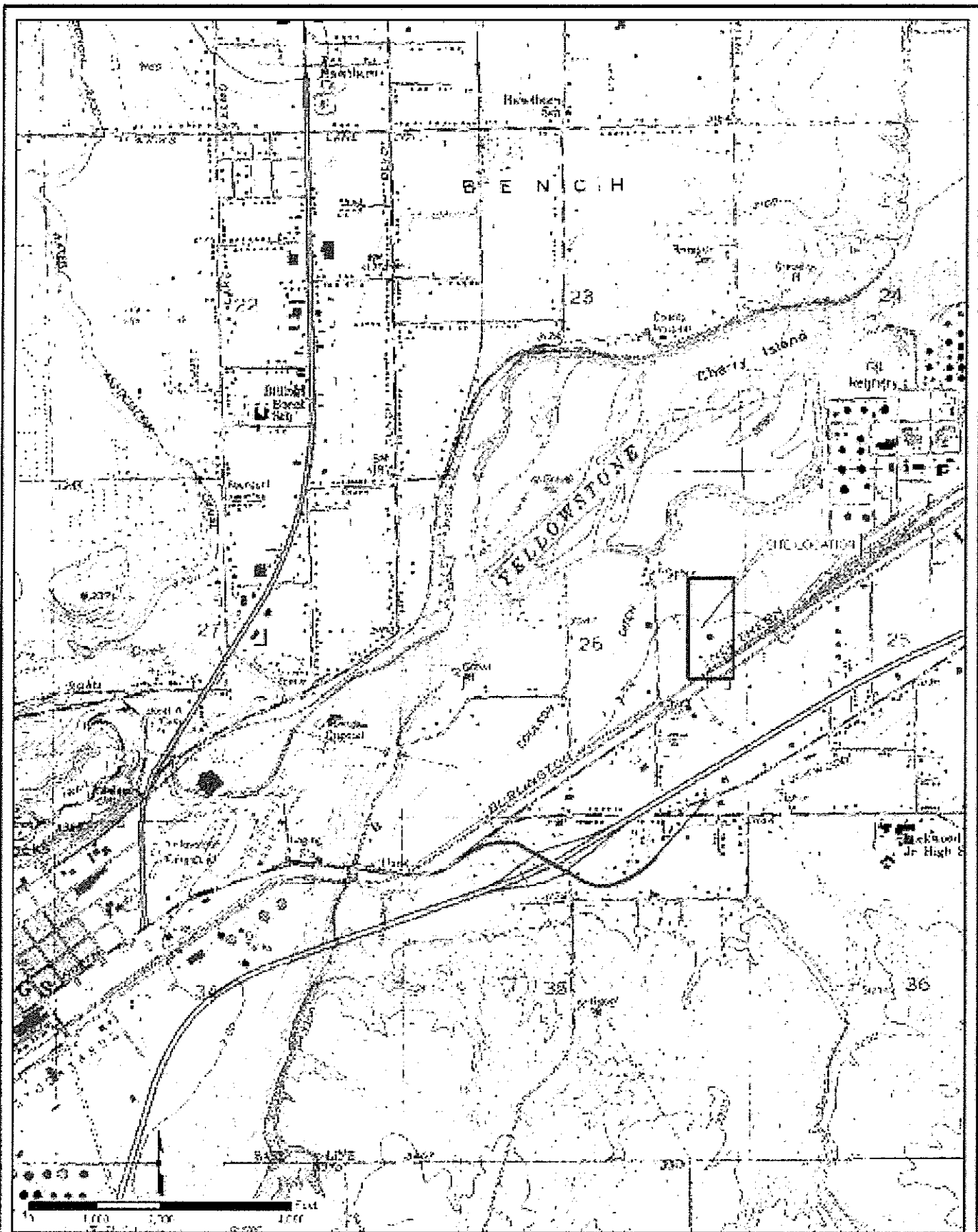
D = Deferred until plant closure or construction  
C = Completed

IDS = Independent Study

IP = In Progress

NFA = No Further Action

NA = Not Applicable



**AECOM**

**LOVELAND PRODUCTS, INC.**

62170218-10100

**SITE LOCATION MAP  
(USGS TOPOGRAPHIC)**

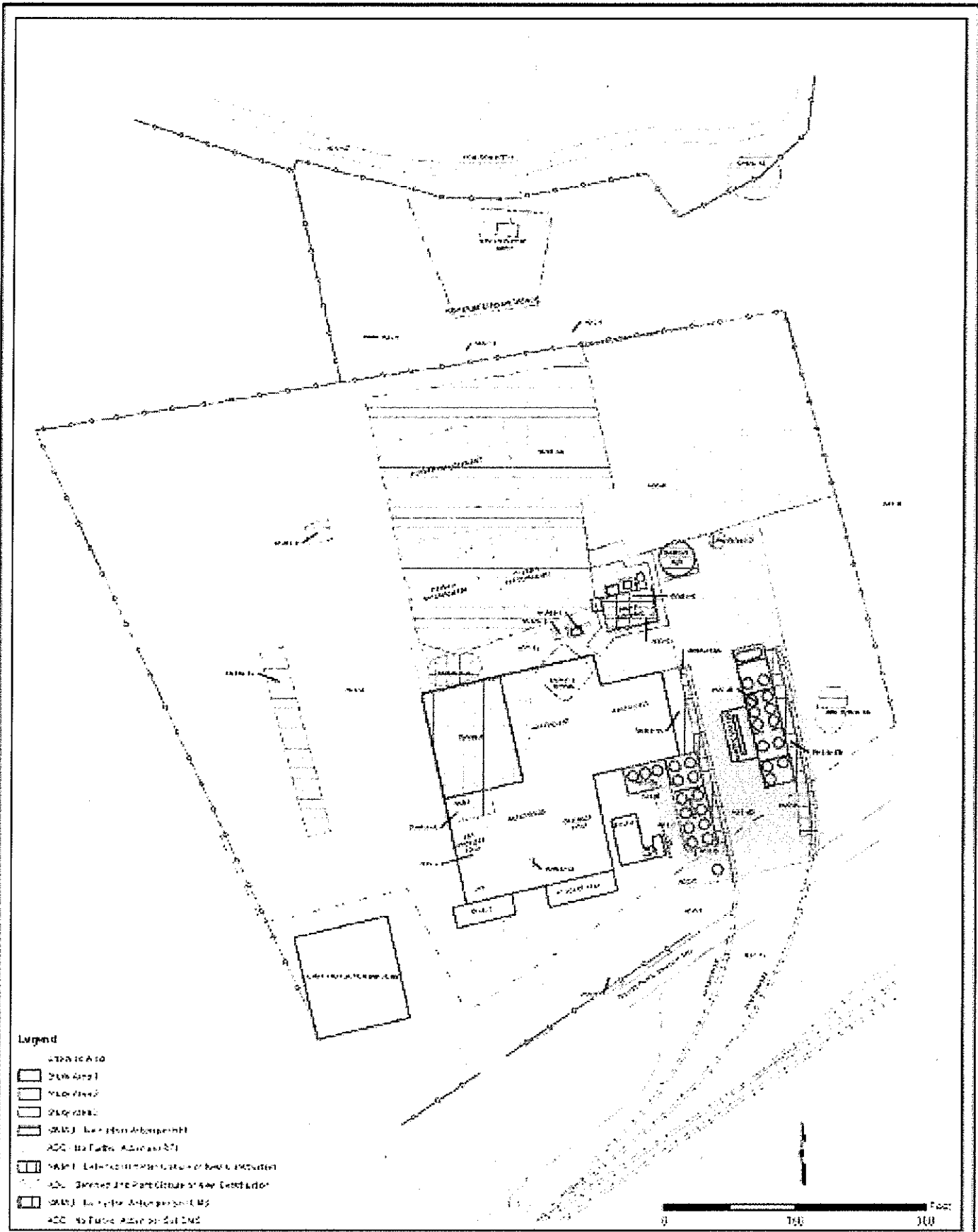
DATE: 3/30/2011

1:25000

Revised: 4/11/11

**FIGURE 1-1**





LOVELAND PRODUCTS, INC.  
 BILLINGS, MONTANA  
 03/01/2005

SWMU AND AOC  
 LOCATIONS

AECOM

DATE 03/01/2005 DRAWN BY: [Name] REVISION: [Number] FIGURE 1-3

**Attachment B  
 Loveland Products, Inc.  
 Scope of Work  
 RCRA Facility Investigation (RFI) Outline**

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1.0. **PURPOSE**

The purpose of the RFI is to characterize contamination at the facility and evaluate potential risks of that contamination to human health and the environment. Components of the characterization include describing the environmental setting; defining contamination sources (source characterization), determining the degree, and extent of any release of hazardous constituents (contamination characterization); identifying actual or potential receptors; and determining associated risks to human health and the environment. The RFI Work Plan must be developed based on Section VIII.E, VIII.F, and/or VIII.H of the Order and should include the framework provided in this Attachment.

LPI should establish preliminary facility-specific objectives for corrective action. Objectives should be based on public health and environmental criteria, information expected to be gathered during the RFI, EPA guidance, and the requirements of any applicable federal and state statutes.

The RFI investigations should result in data of adequate technical content and quality to support the development and evaluation of the corrective measures alternative(s) during the Corrective Measures Study, or to determine no further action is necessary.

2.0. **COMPONENTS**

2.1. Environmental Setting

Information to supplement and/or verify existing information on the environmental setting at the facility should be collected. The following should be characterized as they relate to identified sources, pathways and areas of releases of hazardous constituents from the solid waste management units (SWMUs) and areas of concern (AOCs).

2.1.1. *Hydrogeology*

The hydrogeologic conditions at the facility should be evaluated. This evaluation should provide the following information:

2.1.1.a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the facility, including:

- Regional and facility specific stratigraphy; description of strata including strike and dip, identification of stratigraphic contacts;
- Structural geology; description of local and regional structural features (e.g., folding, faulting, tilting, jointing, etc.);
- Depositional history;
- Regional and facility specific groundwater flow patterns;
- Identification, characterization, and quantification of recharge and discharge areas;

- Characterization of seasonal and temporal variations in the groundwater flow regime; and
  - A map drawn at an appropriate scale to show the location of SWMUs and AOCs in Attachment A.
- 2.1.1.b. An analysis of any topographic features that might influence the groundwater flow system.
- 2.1.1.c. Based on field data, tests, and cores, a representative and accurate classification and description of all hydrogeologic units which may be part of the migration pathways at the facility (i.e., the aquifers and any intervening saturated and unsaturated units), including:
- Hydraulic conductivity and porosity (total and effective);
  - Lithology, grain size, sorting, degree of cementation;
  - An interpretation of hydraulic interconnections between saturated zones; and
  - The attenuation capacity and mechanisms of the natural earth materials (e.g., ion exchange capacity, organic carbon content, mineral content, etc.).
- 2.1.1.d. Based on field studies and cores, structural geology and hydrogeological cross sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways identifying:
- Sand and gravel deposits in unconsolidated deposits;
  - Zones of fracturing or channeling in consolidated or unconsolidated deposits;
  - Zones of higher permeability or lower permeability that might direct and restrict the flow of contaminants;
  - The uppermost aquifer: geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs; and
  - Water-bearing zones above the first confining layer that may serve as a pathway for contaminant migration including perched zones of saturation.
- 2.1.1.e. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient from the potential contaminant sources, a representative description of water level or fluid pressure monitoring including:
- Water level contour and/or potentiometric maps;

- Hydrologic cross sections showing vertical gradients and thickness of immiscibles and/or other known contaminants;
- The flow system, including the vertical and horizontal components of flow; and
- Any temporal changes in hydraulic gradients, for example, due to seasonal influences.

2.1.1.f. A description of manmade influences that may affect the hydrogeology of the site, including Interim Measure units or structures, identifying:

- Active and inactive local water supply and production wells with an approximate schedule of pumping; and
- Manmade hydraulic structures (pipelines, french drains, ditches, unlined ponds, septic tanks, NPDES outfalls, retention areas, etc.).

2.1.1.g. A description of the local geology and potential contaminant migration pathways. These should be determined by an appropriate number of borings and boring spacing. Borings should be located so that reasonably accurate cross-sections can be constructed.

2.1.2. *Soils*

Soil and rock units above the water table in the vicinity of contaminant release(s) should be characterized. Such characterization must include, but not be limited to, the following activities and information, as appropriate:

- SCS soil classification;
- Surface soil distribution;
- Soil profile, including ASTM classification of soils;
- Transects of soil stratigraphy;
- Hydraulic conductivity (saturated and unsaturated);
- Relative permeability;
- Bulk density;
- Porosity;
- Soil sorption capacity;
- Cation exchange capacity (CEC);
- Soil organic content;
- Soil pH;
- Particle size distribution;
- Depth of water table;
- Moisture content;
- Effect of stratification on unsaturated flow;
- Infiltration;
- Evapo-transpiration;
- Storage capacity;
- Vertical flow rate;
- Mineral content; and
- Redox potential (Eh).

2.1.3. *Surface Water and Sediment*

Surface water bodies in the vicinity of the facility should be characterized. Such characterization should include, but not be limited to, the following activities and information:

2.1.3.a. Description of the temporal and permanent surface water bodies including:

- For impoundments: location, elevation, surface area, depth, volume, freeboard, and construction and purpose;
- For streams, ditches, and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, flooding tendencies (i.e., 100 year event), discharge point(s), and general contents;
- For lakes and estuaries: location, elevation, surface area, inflow, outflow, depth, temperature stratification, and volume;
- Drainage patterns; and
- Evapo-transpiration rate.

2.1.3.b. Description of the chemistry of the natural surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biochemical oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients, chemical oxygen demand, total organic carbon, specific contaminant concentrations, etc.

2.1.3.c. Description of sediment characteristics including:

- Deposition area;
- Thickness profile; and
- Physical and chemical parameters (e.g., grain size, density, organic carbon content, ion exchange capacity, pH, etc.)

2.1.4. *Air*

Information characterizing the climate in the vicinity of the facility should be provided in the RFI Report. Such information should include, but not be limited to:

2.1.4.a. A description of the following parameters:

- Annual and monthly rainfall averages;
- Monthly temperature averages and extremes;
- Wind speed and direction;
- Relative humidity/dew point;
- Atmospheric pressure;
- Evaporation data;

- Development of inversions; and
- Climate extremes that have been known to occur in the vicinity of the facility, including frequency of occurrence.

2.1.4.b. A description of topographic and man-made features which affect air flow and emission patterns, including:

- Ridges, hills or mountain areas;
- Canyons or valleys;
- Surface water bodies (e.g. rivers, lakes, bays, etc.);
- Wind breaks and forests; and
- Buildings.

2.2. Source Characterization

To the degree possible without undue safety risks, analytical data should be collected to characterize completely the wastes and the areas where wastes have been placed, collected, or removed. The characterization should include type, quantity, physical form, disposition (containment or nature of deposits), and facility characteristics affecting release (e.g., facility security, and engineering barriers). Procedures used in making the following determinations should be documented. The source characterization should include quantification of the following specific characteristics, at each source area:

2.2.1. *Unit/Disposal Area Characteristics*

- Location of unit/disposal area;
- Type of unit/disposal area;
- Design features;
- Operating practices (past and present);
- Period of operation;
- Age of unit/disposal area;
- General physical conditions; and
- Method used to close the unit/disposal area.

2.2.2. *Waste Characteristics*

2.2.2.a. Type of wastes placed in the unit;

- Hazardous classification (e.g., flammable, reactive, corrosive, oxidizing or reducing agent);
- Quantity; and
- Chemical composition.

2.2.2.b. Physical and chemical characteristics such as:

- Physical form (solid, liquid, gas);
- Physical description (e.g., powder, oily sludge);
- Temperature;

- pH;
- General chemical class (e.g., acid, base, solvent);
- Molecular weight;
- Density;
- Boiling point;
- Viscosity;
- Solubility in water;
- Cohesiveness of the waste;
- Vapor pressure; and
- Flashpoint.

### 2.2.3 *Migration and Dispersal Characteristics of the Waste*

Procedures used in making the following determinations should be documented.

- Sorption capacity;
- Biodegradability, bioconcentration, biotransformation;
- Photodegradation rates;
- Hydrolysis rates; and
- Chemical transformations.

### 2.3. Characterization of Releases of Hazardous Constituents

Analytical data should be collected on groundwater, soils, surface water, sediment, subsurface gas, and air contamination in the vicinity of the facility in accordance with the Sampling and Analysis Plan. These data should be sufficient to define the extent, origin, direction, and rate of movement of contamination. Data should include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individuals performing the sampling and analysis. The following types of contamination at the facility should be addressed:

#### 2.3.1. *Groundwater Contamination*

A groundwater investigation to characterize any plumes of contamination at the facility should be conducted. Procedures used in making all determinations (e.g., well design, well construction, geophysics, modeling, etc.) should be documented. The groundwater investigation should provide at a minimum the following information:

- A description of the horizontal and vertical extent of any plume(s) of hazardous constituents originating from or within the facility;
- The horizontal and vertical direction of contaminant movement;
- The velocity of contaminant movement;
- The horizontal and vertical concentration profiles of hazardous constituents in the plume(s);
- An evaluation of factors influencing the plume movement;
- An extrapolation of future contaminant movement; and

- All available monitoring data including sampling locations.

### 2.3.2. *Soil Contamination*

An investigation to characterize the contamination of the soil and rock units above the saturated zone in the vicinity of any contaminant release should be conducted.

Procedures used in making the following determinations should be documented. The investigation should include the following information:

- A description of the vertical and horizontal extent of contamination;
- A description of appropriate contaminant and soil chemical properties within the contaminant source area and plume. This should include contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;
- Specific contaminant concentrations;
- The velocity and direction of contaminant movement; and
- An extrapolation of future contaminant movement.

### 2.3.3. *Surface Water and Sediment Contamination*

A surface water investigation to characterize contamination in surface water bodies resulting from releases of hazardous constituents at the facility should be conducted.

The investigation should include, at a minimum, the following information:

- A description of the horizontal and vertical extent of any plume(s) originating from the facility, and the extent of contamination in underlying sediments;
- The horizontal and vertical direction of contaminant movement;
- Contaminant velocity;
- An evaluation of the physical, biological and chemical factors influencing contaminant movement;
- An extrapolation of future contaminant movement; and
- A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, and contaminant concentrations, at a minimum. Analytical methods used to obtain the data should be specified.

### 2.3.4. *Air Contamination*

An investigation to characterize particulate and gaseous releases of hazardous constituents into the atmosphere should be conducted. Procedures used in making the

following determinations should be documented. This investigation should provide the following information, if appropriate:

- A description of the horizontal and vertical direction and velocity of contaminant movement;
- The rate and amount of the releases; and
- The chemical and physical composition of the contaminant(s) released, including horizontal and vertical concentration profiles.

2.3.5. *Subsurface Gas Contamination*

An investigation to characterize subsurface gases emitted from buried hazardous wastes and from hazardous constituents in the subsurface should be conducted. The investigation should include, but not be limited to, the following information:

- Horizontal and vertical concentration profiles of the subsurface gases being emitted;
- The chemical composition of the gases being emitted; and
- The rate, amount and density of the gases being emitted.

2.4. Potential Receptors

Data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility should be collected. Chemical analysis of biological samples and/or data on observable effects in ecosystems should also be obtained as appropriate. The following characteristics should be identified:

2.4.1. Current local uses and planned future uses of groundwater:

- Type of use (e.g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial);
- Location of groundwater users, to include withdrawal and discharge wells, within one mile of the affected area; and
- The aquifer or hydrogeologic unit used and/or affected by the current and planned future local uses.

2.4.2. Current local uses and planned future uses of surface waters directly affected by the facility:

- Domestic and municipal (e.g., potable and lawn/gardening watering);
- Recreational (e.g. swimming, fishing);
- Agricultural;
- Industrial; and
- Environmental (e.g., fish and wildlife propagation).

2.4.3. Human use of or access to the facility and adjacent lands, including but not limited to:

- Recreation;
- Hunting;
- Residential;
- Commercial;
- Relationship between population locations and prevailing wind direction; and
- The potential impact on human health including demography, groundwater and surface water use and land use.

2.4.4. A general description of the biota in surface water bodies on, adjacent to, or affected by the facility.

2.4.5. A general description of the ecology within the area adjacent to the facility.

2.4.6. A general demographic profile of the people who use or have access to the facility and adjacent land, including, but not limited to; age, sex, and sensitive subgroups.

2.4.7. A description of any known or documented endangered or threatened species near the facility.

2.5. Investigation Analysis

An analysis and summary of all facility investigations and their results should be prepared. This task should be adequate to ensure that the investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support a Corrective Measures Study. The Investigation Analysis should include:

2.5.1. *Data Analysis*

All facility investigation data should be analyzed and evaluated. A summary should be developed detailing the type and extent of contamination at the facility, including sources and migration pathways. The summary should describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative for the area.

2.5.2. *Baseline Risk Assessment*

A baseline risk assessment should be developed, incorporating the elements listed in the "Outline for Baseline Risk Assessment" contained in Attachment C of this Order.

2.6. Laboratory and Bench-Scale Studies

Laboratory and/or bench-scale studies should be conducted, if necessary to determine the applicability of a corrective measure technology or technologies to facility conditions. LPI should analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.

If such studies are to be implemented, a testing plan should be developed identifying the

type(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.

Upon completion of the testing, testing results should be evaluated to assess the technology or technologies with respect to the site-specific questions identified in the test plan. A report summarizing the testing program and its results, both positive and negative should be prepared for submission to the Department.

### **3.0 DESCRIPTION OF CURRENT CONDITIONS**

The Current Conditions Report provides background information pertinent to the facility. The Current Conditions Report may be submitted with the RFI Work Plan or in a separate document. The data gathered during any previous investigations or inspections and other relevant data should be included, along with a discussion of the quality of the data.

#### **3.1 Nature and Extent of Contamination**

LPI's report should describe the existing information on the nature and extent of contamination with regard to the units and areas of concern which are the subject of the RFI Work Plan.

3.1.1. LPI's report should summarize all possible source areas of contamination. For each area, LPI should identify the following, to the extent that information is available:

- Location of unit/area (which must be depicted on a facility map);
- Quantities of solid and hazardous wastes;
- Hazardous waste or constituents, to the extent known; and
- Identification of areas where additional information is necessary.

3.1.2. The Current Conditions Report should provide an assessment and description of the existing degree and extent of contamination. The assessment should include:

- Available monitoring data and qualitative information on locations and levels of contamination at the facility;
- All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and
- The potential impact(s) on human health and the environment, including demography, groundwater and surface water use, and land use.

### **4.0. RFI WORK PLAN**

The RFI work plan must meet the requirements of this Order and should include elements outlined in this Attachment. The work plan should also include preliminary interim and final objectives for the facility and for the RFI. Other pertinent EPA guidance may be used in work plan development.

4.1. Project Management Plan

The Project Management Plan should include a discussion of the technical approach, schedules, budget and personnel. The Project Management Plan should also include a description of qualifications of personnel performing or directing the RFI, including contractor personnel. This plan should also document the overall management approach to the RCRA Facility Investigation. Objectives for the RFI should be developed

4.2. Sampling and Analysis and Quality Assurance Plans (SAP/QAP)

All sampling and analysis should be conducted in accordance with the SAP/QAP. All sampling locations should be documented in a log and identified on a detailed site map.

The SAP/QAP should document all monitoring procedures including, but not limited to, the sampling and analytical procedures to be performed during the investigation to characterize the environmental setting, source, and releases of hazardous constituents, so as to ensure that all information and data are valid and properly documented. The sampling strategy and procedures should be in accordance with the Characterization of Hazardous Waste Sites, a Methods Manual: Volume II, Available Sampling Methods, EPA-600/4-84-076, Test Methods for Evaluating Solid Waste - Physical/Chemical Methods, SW-846, or other EPA approved methods. In accordance with Section VIII of the Order on Consent, LPI should include in the RFI work plan justifications for deviations from these references.

The SAP/QAP should include the following:

4.2.1. *Data Collection Strategy*

4.2.1.a. A description of the intended uses for the data and the necessary level of precision and accuracy for these uses;

4.2.1.b. A description of the methods and procedures to be used to assess the precision, accuracy and completeness of the data;

4.2.1.c. A description of the rationale used to assure that the data accurately and precisely represent characteristics of a population, parameter variations at a sampling point, a process condition or an environmental condition. Examples of factors which should be considered and addressed include:

- Environmental conditions at the time of sampling;
- Number of sampling points;
- Representativeness of selected media; and
- Representativeness of selected analytical parameters.

4.2.1.d. A description of the measures to be taken to assure that the following data sets are comparable:

- RFI data generated by LPI;
- RFI data generated by an outside laboratory or consultant versus data generated by LPI; and

- Data generated by separate consultants or laboratories.
- 4.2.1.e. Details relating to the schedule and information to be provided in quality assurance reports, including:
- Periodic assessment of measurement data accuracy, precision, and completeness;
  - Results of performance audits;
  - Results of system audits;
  - Significant quality assurance problems and recommended solutions; and
  - Resolutions of previously stated problems.

4.2.2. *Sampling Strategy*

The sampling strategy should incorporate the following:

- Selecting appropriate sampling locations, depths etc.;
- Providing a statistically significant number of sampling sites;
- Obtaining all necessary ancillary data;
- Determining conditions under which sampling should be conducted;
- Determining which media are to be sampled (e.g., groundwater, air, soil, sediment, subsurface gas);
- Determining which parameters are to be measured and where and documenting the rationale for parameter selection;
- Selecting the frequency of sampling and length of sampling period;
- Selecting the types of samples (e.g., composites vs. grabs) and number of samples to be collected; and
- Preventing contamination of the sampling equipment and cross contamination between sampling points.

4.2.3. *Sampling Procedures*

4.2.3.a. Documenting sampling operations and procedures, including:

- Procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, preservatives, and absorbing reagents);

- Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
- Specific sample preservation methods;
- Calibration of field instruments;
- Collection of replicate samples;
- Submission of field-based blanks, where appropriate;
- Potential interferences present at the facility;
- Construction materials and techniques associated with monitoring wells and piezometers;
- Field equipment listing and sampling containers;
- Sampling order; and
- Decontamination procedures.

4.2.3.b. Selecting appropriate sample containers;

4.2.3.c. Sample preservation; and

4.2.3.d. Chain-of-custody, including:

- Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and
- Pre-prepared sample labels containing all information necessary for sample tracking.

4.2.4. *Field Measurements*

4.2.4.a. Determining which parameters are to be measured and where;

4.2.4.b. Selecting the frequency of field measurements and duration of field measurement period;

4.2.4.c. Providing a statistically significant number of field measurements;

4.2.4.d. Determining conditions under which field measurements should be conducted;

4.2.4.e. Determining which media are to be addressed by appropriate field measurements (e.g., groundwater, air, soil, sediment, etc.);

4.2.4.f. Documenting field measurement operations and procedures, including:

- Procedures and forms for recording raw data and the exact location, time, and facility-specific considerations associated with the data acquisition;
- Calibration of field instruments;
- Collection of replicate measurements;
- Submission of field-based blanks, where appropriate;
- Potential interferences present at the facility;
- Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;
- Field equipment listing;
- Order in which field measurements will be made; and
- Decontamination procedures.

4.2.5. *Sample Analysis*

Sample analyses should be conducted in accordance with the most recent edition of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846 (Third Edition, 1986 and most recent updates), Standard Methods of Wastewater Analysis (Fifteenth Edition, 1980) or an equivalent method approved by the Department. The sample analysis section of the Sampling and Analysis Plan should specify the following:

4.2.5.a. Chain-of-custody procedures, including:

- Identification of the responsible party at the laboratory who is authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;
- Use of a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and
- Specification of laboratory sample custody procedures for sample handling, storage, and dispersment for analysis.

4.2.5.b. Sample storage, procedures, and storage times;

4.2.5.c. Sample preparation methods;

4.2.5.d. Analytical procedures, including:

- Scope and application of the procedure;
- Sample matrix;
- Potential interferences;

- Precision and accuracy of the methodology; and
- Method detection limits.

4.2.5.e. Calibration procedures and frequency;

4.2.5.f. Data reduction, validation and reporting;

4.2.5.g. Internal quality control checks, laboratory performance and systems audits and frequency, including:

- Method blank(s);
- Laboratory control sample(s);
- Calibration check sample(s);
- Replicate sample(s);
- Matrix-spiked sample(s);
- "Blind" quality control sample(s);
- Control charts;
- Surrogate samples;
- Zero and span gases; and
- Reagent quality control checks.

4.2.5.h. Preventive maintenance procedures and schedules;

4.2.5.i. Corrective action (for laboratory problems); and

4.2.5.j. Turnaround time.

4.2.6. *Groundwater Investigations*

4.2.6.a. Monitoring system design

- Downgradient wells should be located to satisfy regulatory requirements for release detection and no migration of hazardous constituents beyond the site boundary. The horizontal placement of these wells should be such that they intercept potential pathways for contaminant migration. Wells should be monitored at each depth necessary to ensure immediate detection of a release.
- Upgradient or background wells should be installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer that represent the quality of uncontaminated water that has not been affected by leakage from a SWMU or AOC. A sufficient number of wells should be installed to allow for stratified comparisons of water quality and to account for spatial variability in groundwater quality.

4.2.6.b. Monitoring well drilling methods

- Drilling should be performed in a manner that minimizes the disturbance and maintains the natural properties of the subsurface materials;

- Contamination and/or cross-contamination of groundwater and aquifer materials should be avoided;
- The drilling method should allow for the collection of representative samples of rock, unconsolidated materials, and soil;
- The drilling method should allow the owner/operator to determine when the appropriate location for the screened interval has been encountered;
- The drilling method should allow sufficient annular space around the well casing and screen to place the filter pack and annular sealants; and
- The drilling method should allow for the collection of representative groundwater samples. Drilling muds should be used only when minimal impact to the surrounding formation and groundwater can be ensured.

#### 4.2.6.c. Monitoring well design and construction

- The most suitable material for a particular well at a particular site will depend on the characteristics of the site hydrogeology. The following factors should be taken into consideration: depth to the water-bearing zone, geochemistry of the soil and rock over the entire interval in which the well is to be cased, and the chemistry of the groundwater at the site. In addition, the screens and casing of all groundwater wells should be: 1) inert in the water being tested and 2) chemically resistant to any contaminants that are present in the aquifer(s) being monitored.
- The appropriate length of well screens varies from site to site, however; LPI should provide justification for any screen which cuts across hydraulically separated geologic units. Well screens must be factory slotted or the equivalent. Field slotting is not permitted under any conditions.
- All wells should have a bottom sump to allow sediments that may enter the well to settle without silting in the well and preventing proper flow of fluids.
- The annular space between the borehole wall and the screen or slotted casing should be filled to minimize passage of formation materials into the well.
- A filter pack should be used when the natural formation is: 1) poorly sorted; 2) a uniform fine sand, silt, or clay; 3) very thin-bedded; 4) poorly cemented sandstone; or 5) highly fractured or characterized by relatively large solution channels. Filter pack material should be chemically inert and may not be constructed from fabric.

#### 4.2.6.d. Annular sealant

- The well annulus must be properly sealed. Sealant materials should be chemically compatible with the highest anticipated concentration of chemical constituents that may be expected in the groundwater.

- When the screened interval is within the saturated zone, a minimum of two feet of sealing material should be placed immediately over the protective sand layer overlying the filter pack.
- The precise volume of filter pack material and sealant required should be calculated before placement; the actual volumes used should be determined during well construction. Any discrepancies between the calculated volumes and the actual volumes should be detailed and documented.

#### 4.2.6.e. Surface completion

- A monitoring well surface seal should be installed on top of the annular sealant and extend vertically up the well annulus between the well casing and the borehole to the land surface.
- A protective casing should be installed around the well casing to prevent damage or unauthorized entry.
- A suitable cap should be placed on the well to prevent tampering or the entry of any foreign materials. A lock should be installed on the cap to provide security. Lubricants may not be applied to the lock.

#### 4.2.6.f. Documentation of well design

LPI should keep a record of the following information for each well:

- A well construction log;
- Date of construction;
- Drilling method and drilling fluid used;
- Well location ( $\pm 0.5$  ft);
- Bore hole and well casing diameter;
- Well depth ( $\pm 0.1$  ft);
- Drilling and lithologic logs;
- Casing materials;
- Screen materials and design;
- Casing and screen joint types;
- Screen slot size/length;
- Filter pack material/size, grain analysis;
- Filter pack volume calculations;
- Filter pack placement method;
- Sealant materials (% bentonite);
- Sealant placement method;
- Sealant volume (lbs/gallon of cement);
- Surface seal design/construction
- Well development procedure;
- Type of protective well cap;
- Ground surface elevation ( $\pm 0.01$  ft);
- Surveyor's pin elevation ( $\pm 0.01$  ft) on concrete apron;

- Top of monitoring well casing elevation ( $\pm 0.01$  ft);
- Top of protective steel casing elevation ( $\pm 0.01$  ft); and
- Detailed drawing of well (include dimensions).

#### 4.2.7. *Water Level Elevation Determination*

The following procedures should be followed when determining water level elevations:

- Field measurements should include depth to standing water and total depth of the well to the bottom of the intake screen.
- Prior to measurement, water levels in piezometers and wells should be allowed to stabilize for a minimum of 24 hours after well construction and development or well purging.
- Water level measurements from boreholes, piezometers, or monitoring wells used to define the water table or a single potentiometric surface should be collected within less than 24 hours.

#### 4.2.8. *Well Purging*

The following procedures should be followed when purging wells:

- The purging method should ensure that all stagnant water is replaced by fresh formation water upon completion of the procedure.
- If the purged water is contaminated or if its chemistry is unknown, the water should be stored in appropriate containers until analytical results are available, at which time proper arrangements for disposal or treatment should be made.
- When purging a medium-to high-yielding well, the well should not be pumped dry if recharge causes the formation water to cascade vigorously down the sides of the screen.
- When purging a low yielding well, under no circumstances should the well be allowed to recover fully before sampling is started.

#### 4.2.9. *Sample Collection*

- Monitoring well sampling should always progress from the well expected to be least contaminated to the well expected to be most contaminated. Samples to be analyzed for the most volatile constituents should be collected and containerized first.
- Equipment that minimizes agitation and reduces or eliminates contact with the atmosphere during sample transfer should be used.
- The following equipment or materials are not acceptable: neoprene fittings, PVC bailers, tygon tubing, silicon rubber bladders, neoprene impellers, polyethylene, and viton.

4.2.10. *Bailers*

The following precautions should be taken when using bailers:

- Bailers used in sampling groundwater from monitoring wells should be constructed of either fluorocarbon resin or stainless steel. Disposable single-use inert polyethylene bailers may also be used. The cable used to raise and lower the bailer should also be an inert material or coated with an inert material.
- Bailers should never be dropped into a well and should be removed in a manner that causes as little agitation as possible.

4.2.11. *Sample Preservation*

- Chemical preservatives should be added to the samples in the field.
- A temperature history of the samples should be maintained. Upon receipt of a shipment, the laboratory should record the temperatures on the chain of custody record;
- The laboratory should record the date/time sampled, the date/time received, the date/time extracted, and the date/time analyzed for all samples received.
- Samples should not be filtered in the field or transferred from one sample container to another unless approved by the Department.
- No headspace should exist in the containers of samples containing volatile organics.

4.2.12. *Borehole Location and Sampling Strategy*

- Borings should be located so that reasonably accurate cross-sections can be constructed.
- Borehole samples should be collected with a shelly tube, split barrel sampler, rock corer, or other appropriate device and should be described in the field by a professional experienced in geology. Concise drilling logs and field records should be kept.
- Samples should be collected from all borings at intervals equal to 10% of the total depth of the borehole and should be collected wherever contamination is suspected.
- Borings in which permanent wells are not installed and wells being abandoned should be sealed with material at least an order of magnitude less permeable than the surrounding soil.

4.3. Data Management Plan

A Data Management Plan should be developed to document and track the RFI data and results. This plan should identify and set up data documentation materials and procedures, project file requirements, and progress reporting procedures and documents.

The plan should also describe the format for presenting the raw data and conclusions of the investigation.

4.3.1. *Data Record*

The data record should include the following:

- Unique sample or field measurement code;
- Sampling or field measurement location and sample or measurement type;
- Sampling or field measurement raw data;
- Laboratory analysis ID number;
- Property or component measures; and
- Result of analysis (e.g. concentration).

4.3.2. *Tabular Displays*

The following data should be presented in tabular displays:

- Unsorted (raw) data;
- Results for each medium, or for each constituent monitored;
- Data reduction for statistical analysis, as appropriate;
- Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and
- Summary data.

4.3.3. *Graphical Displays*

The following data should be included in the Data Management Plan and may be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transits, three dimensional graphs, etc.):

- Sampling location and sampling grid;
- Boundaries of sampling locations and areas where more data are required;
- Geographical extent of contamination;
- Contamination levels, averages and maxima;
- Sampling locations and levels of contamination at each;
- Changes in concentration in relation to distances from the source, time, depth or other parameters; and
- Features affecting inter-media or intramedia transport and potential receptors.

4.4. Health and Safety Plan

4.4.1. LPI should prepare a Health and Safety Plan which includes the following:

- A facility description including the locations of roads, water supply, electricity, and telephone service;
- The known hazards and an evaluation of the risks associated with those hazards;
- Key personnel and alternates responsible for site safety, response operations, and the protection of public health;
- A description of the work area;
- Levels of protection to be worn by personnel;
- Procedures to control site access;
- Decontamination procedures for personnel and equipment;
- Site emergency procedures;
- Emergency medical care for injuries and toxicological problems;
- Requirements for an environmental surveillance program;
- Routine and special training required for responders; and
- Procedures for protecting workers from weather-related problems.

4.4.2 The Health and Safety Plan should be consistent with:

- NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
- EPA Order 1440.1 - Respiratory Protection;
- EPA Order 1440.3 - Health and Safety Requirements for Employees Engaged in Field Activities;
- Facility Contingency Plan;
- EPA Standard Operating Safety Guide (1984);
- OSHA regulations, particularly in 29 CFR 1910 and 1926;
- State and local regulations; and
- Other EPA guidance as provided.

\*\* Note – the Department will not approve or disapprove LPI's Health and Safety Plan.

4.5. Community Relations Plan

A plan for the dissemination of information to the public, regarding investigation activities and results should be prepared.

**Attachment C  
Loveland Products, Inc.  
Scope of Work  
Baseline Risk Assessment  
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## 1.0. INTRODUCTION

- Statement of the problem
- Site-specific objectives of the risk assessment
- Risk assessment report organization

### 1.1. Site Background

- Site description
- Map of site
- Site history
- Current land use
- Regulatory background
- Significant site reference points
- Description of SWMUs, AOCs, and other units considered in the risk assessment
- General sampling locations and media sampled
- Description of any interim corrective or stabilization measures

### 1.2. Scope of Risk Assessment

- Complexity of assessment
- Synopsis of study design

## 2.0. SITE CHARACTERIZATION

### 2.1. Summary of the Remedial Investigation Results

- Soil/sediment/waste investigation
- Surface water investigation
- Ground water investigation

## 3.0. DATA USABILITY

### 3.1. Site-Specific Data Collection Considerations

- Identification of potential human exposure
- Identification of potential environmental exposure
- Groundwater, soils and air modeling parameters
- Sampling locations and media sampled
- Sampling methods for each medium
- QA/QC methods for sample collection and analysis

### 3.2. Study Areas For Which Media-Specific Samples Were Collected

- Collection strategies for sampling in each area studied
- Evaluation of data collected
- Comparison of chemical concentrations with background samples
- Uncertainties in data

## 4.0. HUMAN HEALTH BASELINE RISK ASSESSMENT

### 4.1. Selection/Description of Chemicals of Potential Concern

- Summary of applicable Data Usability in Section 3.0

- Comparison of maximum soil, groundwater, surface water and sediment concentrations to screening and background levels
- Comparison of detection limits to screening or background levels
- Potential daughter products
- Final selection of human health COPCs

4.2. Identify Receptors of Concern/Potentially Exposed Populations

- Typical on- and off-site receptor types
- Relative locations and descriptions of populations with respect to site
- Current land uses adjacent to site
- Populations of concern which might be or are being affected by site contaminants

4.3. Characterization of Exposure Setting

- Climate
- Vegetation
- Soil types
- Surface water hydrology
- Ground water hydrology

4.3.1. *Identification of Exposure Pathways*

- Contaminant sources- primary and secondary
- Media receiving contamination on- and off-site
- Fate and transport of contaminants in media
- Exposure points and exposure routes
- Integration of sources, releases, fate and transport mechanisms, exposure points, and exposure routes into complete exposure pathways
- Summary of exposure pathways to be quantified
- Current and potential future receptors
- Conceptual site model

4.4. Risk Analysis

4.4.1. *Exposure Assessment*

4.4.1.1. Quantification of Exposure

- Exposure Point Concentrations
- Chemical intake estimates for individual exposure pathways

4.4.1.2. Summary of Exposure Assessment

4.4.2 *Toxicity Assessment*

4.4.2.1. Toxicity Information for Non-carcinogenic Effects

- Appropriate exposure periods for toxicity values
- Latest Reference Dose (RfD) for all chemicals
- Reference Concentration (RfC) for all chemicals
- One- and ten-day health advisories for shorter term oral exposures
- Overall database and the critical study on which the toxicity value is based

- Effects that may appear at doses higher than those required to elicit critical effect
  - Consideration of absorption efficiency
- 4.4.2.2. Toxicity Information for Carcinogenic Effects
- Exposure averaged over lifetime
  - Latest slope factors for all carcinogens
  - Weight-of-evidence classification for all carcinogens
  - Concentrations above which the dose-response curve is no longer linear
- 4.4.2.3. Chemicals for Which No EPA Toxicity Values Are Available
- Qualitative evaluation
  - Documentation/justification of any new toxicity values
- 4.4.2.4. Uncertainties Related To Toxicity Information
- Quality of individual studies
  - Completeness of overall database
  - Uncertainty Factors
  - Modifying Factors
- 4.4.2.5. Summary of Toxicity Information

4.5. Risk Characterization

4.5.1. *Current Land-Use Conditions*

- Carcinogenic risk of individual substances
- Chronic hazard quotient calculation for individual substances
- Subchronic hazard quotient calculation for individual substances
- Shorter-term hazard quotient calculation for individual substances
- Carcinogenic risk for multiple substances
- Chronic hazard index for multiple substances
- Subchronic hazard index for multiple substances
- Shorter-term hazard index calculation for multiple substances
- Segregation of hazard indices
- Justification for combining risks across pathways
- Non-carcinogenic hazard index (multiple pathways)
- Carcinogenic risk (multiple pathways)

4.5.2. *Future Land-Use Conditions*

- Carcinogenic risk of individual substances
- Chronic hazard quotient calculation for individual substances
- Subchronic hazard quotient calculation for individual substances
- Shorter-term hazard quotient calculation for individual substances
- Carcinogenic risk for multiple substances
- Chronic hazard index for multiple substances
- Subchronic hazard index for multiple substances
- Shorter-term hazard index calculation for multiple substances

- Segregation of hazard indices
- Justification for combining risks across pathways
- Non-carcinogenic hazard index (multiple pathways)
- Carcinogenic risk (multiple pathways)

#### 4.5.3. *Uncertainties*

- Site-specific uncertainty factors
- Definition of physical setting
- Model applicability and assumptions
- Parameter values for fate/transport and exposure calculations
- Summary of toxicity assessment uncertainty
- Identification of potential health effects
- Derivation of toxicity value
- Potential for synergistic or antagonistic interactions
- Uncertainty in evaluating less-than-lifetime exposures

#### 4.5.4. *Summary Discussion and Tabulation of Risk Characterization*

- Key site-related contaminants and exposure pathways
- Types of health risks of concern
- Level of confidence in the quantitative information used to estimate risk
- Presentation of qualitative information on toxicity
- Confidence in the key exposure estimates for key exposure pathways
- Magnitude of the carcinogenic and non-carcinogenic risk estimates
- Major factors driving risk
- Major factors contributing to uncertainty
- Exposure human population characteristics
- Comparison with site-specific health studies

#### 4.6. Human Health Risk Assessment References

### 5.0. **ECOLOGICAL RISK ASSESSMENT**

#### 5.1. Problem Formulation

##### 5.1.1. *Selection of Ecological COPCs (Screening Level ERA)*

- Summary of applicable Data Usability in Section 3.0
- Comparison of maximum soil, groundwater, surface water and sediment concentrations to screening or background levels
- Comparison of detection limits to screening levels
- Inclusion of bioaccumulative chemicals
- Final selection of ecological COPCs

#### 5.2. Ecological Setting

- Climate
- Vegetation
- Soil types
- Surface water hydrology

- Ground water hydrology
- Detailed habitat descriptions
- List of species observed or expected to occur
- Discussion of special status species

#### 5.2.1. *Conceptual Site Model*

- Environmental setting
- Ecological COPCs
- Contaminant sources
- Media receiving contamination on-and off-site
- Fate and transport of contaminants in media
- Potential exposure pathways
- Current and potential future receptors
- Conceptual model diagrams

#### 5.2.2. *Assessment Endpoints*

- Description of management goals
- Identification of assessment endpoints linked to management goals

#### 5.2.3. *Analysis Plan*

- Risk hypotheses or questions
- Identification of measures (including measures of effect, measures of exposure, and measures of ecosystem and receptor characteristics)
- Brief description of site-specific biota surveys or toxicity tests that were conducted (complete study reports should be included as attachments)
- Selection of representative receptors (for wildlife, typically one avian and one mammalian species from each of the feeding guilds that are expected to be most highly exposed)
- Specify data quality objectives
- Outline weight-of-evidence framework

#### 5.2.4. *Risk Analysis*

##### 5.2.4.1. Exposure Assessment

- Exposure concentrations
- Exposure parameters
- Methods for estimating tissue concentrations (measured or modeled)
- Uptake factors (if applicable)
- Ingested dose, hazard quotient, and other relevant equations

##### 5.2.4.2. Effects Assessment

- Toxicity reference values (TRVs) for abiotic media to protect community-level receptors such as plants, terrestrial invertebrates, benthic invertebrates and aquatic life
- Dose-based TRVs for wildlife
- Critical body residue TRVs (if applicable)

- Dietary TRVs for fish and/or wildlife (if applicable)

5.2.5. *Risk Characterization*

- Description of hazard quotient calculation methods
- Discussion of risks for each line of evidence
- Spatial analysis of risks for receptor with limited mobility (e.g., plants, invertebrates)
- Background comparison for inorganic compounds
- Weight-of-evidence analysis

5.2.6. *Uncertainty Analysis*

- Discussion of qualitative magnitude and direction of each uncertainty (uncertainty tendency to underestimate or overestimate risks)
- Conceptual model
- Exposure model applicability and assumptions
- Exposure concentrations
- Exposure parameters
- Toxicity values
- Potential for synergistic or antagonistic interactions

5.2.7. *Ecological Risk Assessment Conclusions*

5.3. Ecological Risk Assessment References

6.0. **SUMMARY**

7.0. **CONCLUSIONS**

**Attachment D  
Loveland Products, Inc.  
Scope of Work  
RCRA Corrective Measures Study (CMS) Outline  
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1.0. **Purpose**

The purpose of the Corrective Measures Study (CMS) is to develop and evaluate corrective action alternatives and to recommend the corrective measures to be implemented at the facility. LPI shall furnish the personnel, materials, and services necessary to prepare the Corrective Measures Study, except as otherwise specified.

2.0. **Identification and Development of the Corrective Measures Alternatives**

Based on the results of the RCRA Facility Investigation, LPI shall identify, screen, and develop alternatives for corrective action. Corrective action must include, but is not limited to, removal, containment, treatment, and/or other remediation of the contamination based on the media clean up objectives established for the corrective action.

2.1. Description of Current Situation

LPI shall submit a summary of, and if necessary an update to, the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the RCRA Facility Investigation Report. In addition to summarizing the environmental conditions, this section should describe any interim actions implemented or ongoing.

2.2. Establishment of Media Clean-Up Objectives

LPI, in conjunction with the Department, shall establish media clean up objectives for the corrective action. These objectives shall be based on EPA guidance, public health and environmental criteria, information gathered during the RCRA Facility Investigation, and applicable State and Federal laws and regulations.

Media clean up objectives include, but are not limited to, the following components:

1. Clean up levels which are the site-specific concentrations in a given media that a final remedy must achieve for the remedy to be considered complete;
2. Point of compliance which represents where the media clean up levels are to be achieved; and
3. Remediation time frames including both the time frame to construct the remedy and the estimate of the time frame to achieve the cleanup levels at the point of compliance.

2.3. Identification of the Corrective Measures Alternative(s)

LPI shall identify the corrective measure alternatives that are applicable to the facility and that will achieve the media clean up objectives. Technologies may be combined to form the overall corrective action alternatives. The alternatives developed should represent a workable number of options. These alternatives must, at a minimum, meet the following criteria:

1. Be protective of human health and the environment;
2. Attain media cleanup objectives; and
3. Control the source(s) of releases so as to reduce or eliminate, to the extent practicable, further releases of hazardous wastes (including hazardous constituents) that may pose a threat to human health and the environment.

Alternatives that do not meet these criteria do not warrant further consideration.

### 3.0. **Evaluation of the Corrective Measures Alternatives**

LPI shall describe each corrective measures alternative that passes through the initial screening described in Section 2.3. and evaluate each corrective measures alternative and its components relative to the following criteria: long-term reliability and effectiveness; reduction of toxicity, mobility or volume; short-term effectiveness; implementability; and cost.

#### 3.1. Long-Term Reliability and Effectiveness

Any potential remedies must be assessed for the long-term reliability and effectiveness it affords, along with the degree of certainty that the remedy will prove successful. Factors that shall be considered in this evaluation include:

1. Magnitude of residual risks in terms of amount and concentrations of waste remaining following implementation of a remedy, considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastes (including hazardous constituents);
2. The type and degree of long-term management required, including monitoring and operation and maintenance;
3. Potential for exposure of humans and environmental receptors to remaining wastes;
4. Long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated wastes and residuals; and
5. Potential need for replacement of the remedy.

#### 3.2. Reduction of Toxicity, Mobility or Volume

A potential remedy shall be assessed as to the degree to which it employs treatment that reduces toxicity, mobility or volume of hazardous wastes (including hazardous constituents). Factors that shall be considered in such assessments include:

1. The treatment processes the remedy employs and materials it would treat;

2. The amount of hazardous wastes (including hazardous constituents) that would be destroyed or treated;
3. The degree to which the treatment is irreversible;
4. The residuals that will remain following treatment, considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastes (including hazardous constituents).

3.3. Short-Term Effectiveness

Short-term effectiveness of a potential remedy(s) shall be assessed considering the following:

1. Magnitude of reduction of existing risks;
2. Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and disposal or containment; and
3. Time until full protection is achieved.

3.4. Implementability

The ease or difficulty of implementing a potential remedy shall be assessed by considering the following types of factors:

1. Degree of difficulty associated with constructing the technologies;
2. Expected operational reliability of the technologies;
3. Need to coordinate with and obtain necessary approvals and permits from other agencies;
4. Availability of necessary equipment and specialists; and
5. Available capacity and location of needed treatment, storage, and disposal services.

3.5. Cost

The types of cost that shall be assessed include the following:

1. Capital costs;
2. Operation and maintenance costs;

3. Net present value of capital and operations and maintenance costs; and
4. Potential future remedial action costs.

4.0. **Justification and Recommendation of the Corrective Measures Alternative**

LPI shall recommend a corrective measures alternative based on an evaluation of the criteria in Section 3.0. The recommendation shall include a description and supporting rationale for the proposed remedy, including how it will achieve the media clean up objectives and the proposed remedy's relationship to the decision factors discussed above. This recommendation shall include summary tables that allow the alternatives to be easily understood. LPI shall highlight advantages and disadvantages among the criteria in Section 3.0 for the alternatives under consideration. The Department will select the corrective measures alternative to be implemented, based on the results provided under Sections 2.0 and 3.0.

5.0. **Work Plan**

The CMS Work Plan must meet the requirements of Section VIII of the Order on Consent and should include the elements outlined in this Attachment. Other pertinent EPA guidance may be used in Work Plan development. The Work Plan should present facility-specific objectives for remediation and the methods LPI will use to develop and evaluate appropriate corrective measure alternatives. The Work Plan should also present criteria to be used in determining which alternative best meets the objectives.

The CMS Work Plan should include, but not be limited to, the following:

1. Description of the general approach to investigating and evaluating potential remedies;
2. Definition of the overall objectives of the study;
3. Description of the specific remedies which will be studied;
4. Plans for evaluating remedies pursuant to Sections 2 and 3 above;
5. Schedules for conducting the study; and
6. Proposed format for information presentation.

6.0. **Reports**

6.1. Progress Reports

LPI shall submit Quarterly Progress Reports to the Department. The progress reports shall at a minimum contain the information required in Section XI of the Order on Consent.

6.2. Corrective Measures Report

LPI shall prepare a draft and final Corrective Measures Study Report presenting the results of evaluations conducted pursuant to Sections 2 and 3. The Report shall include a recommendation for a corrective measures alternative. The Report must meet the requirements of Section VIII of the Order on Consent.

The Report should, at a minimum, include:

1. Site Description:

A description of the facility, including a site topographic map. The description should include the current situation at the facility and the known nature and extent of the contamination as documented by the RFI Report, as well as any previous response activities and/or interim measures that have or are being implemented.

2. RFI Summary

A summary of the RFI and its impact on the selected corrective measures, including the following information:

- Field studies (ground water, surface water, soil, and air);
- Summary of the human health and the ecological risk assessment, if performed; and
- Laboratory studies (bench scale and pilot scale).

3. Corrective Measures Alternatives

The discussion of the corrective measures alternatives should include the following:

- Description of the corrective measures, the results of the evaluation, and rationale for selection. Each corrective measure evaluated should be described, including those that did not pass the initial screening;
- Performance expectations, including media cleanup levels, points of compliance and remediation time frames;
- Preliminary design criteria and rationale;
- General operation and maintenance requirements; and

- Long-term monitoring requirements.

4. Design and Implementation Precautions

The discussion should include design and implementation issues including the following:

- Special technical problems;
- Additional engineering data requirements;
- Permits and regulatory requirements;
- Access, easements, right-of-way, and other institutional controls;
- Health and safety requirements; and
- Community relations activities.

5. Cost Estimates

Capital cost estimates and operation and maintenance cost estimates should be included in the report.

6. Schedules

A project schedule including design, construction and operation should be discussed.

**Attachment E**  
**Loveland Products, Inc.**  
**Scope of Work**

**Corrective Measures Implementation (CMI) and Interim Measures (IM) Work Plans**

- 1.0 **ENGINEER DESIGN**
  - Treatment Systems
  - Containment Systems
  - Cover Systems
  - Monitoring Networks
  - Security
  
- 2.0 **OPERATION AND MAINTENANCE**
  - Treatment Systems
  - Containment Systems
  - Cover Systems
  - Monitoring Networks
  
- 3.0 **MONITORING AND PERFORMANCE MONITORING**
  - Location
  - Frequency
  - Sampling and Analysis
  - Same Requirements as Section 4.2 of Attachment B
  
- 4.0 **WASTE MANAGEMENT**
  - On-Site Management
  - Sampling and Analysis
  - Disposition
  
- 5.0 **HEALTH AND SAFETY PLAN**
  - Same Requirements as Section 4.4 of Attachment B
  
- 6.0 **SCHEDULE**
  - Construction
  - Operation
  - Monitoring/Performance Monitoring
  - Closure/Completion
  
- 7.0 **REMEDIATION GOALS**
  - Specify Media Goals
  - Time Frames for Achieving Goals
  
- 8.0 **REPORTING**
  - Types of Reports
  - Frequency of Reporting
  
- 9.0 **PUBLIC PARTICIPATION**
  - Major Changes to the Selected Corrective Measure(s)
  - At Completion of Corrective Measure(s)

10.0 **DEMONSTRATION OF FINANCIAL ASSURANCE AND COST ESTIMATES**

- Cost Estimate for Corrective Measures Implementation
- Cost Estimate for Maintenance of Corrective Measures after Implementation

**Attachment F**  
**Loveland Products, Inc.**  
**Compliance Schedule**

<b>ACTIVITY &amp; ORDER SECTION(S)</b>	<b>DUE DATE*</b> *Unless otherwise approved by DEQ
<b>Newly Identified SWMUs/AOCs, Newly Discovered Releases at Existing SWMUs/AOCs, and Deferred SWMUs/AOCs</b>	
1. Notification of newly identified SWMUs/AOCs – Section VIII.E.1.	Within 15 calendar days after discovery
2. Notification of newly discovered releases from existing SWMUs/AOCs – Section VIII.F.1.	Within 15 calendar days after discovery
3. Notification of Facility closure or construction activity that would allow safe access to subsurface soil at any Deferred Unit – Section VIII.G.1.	At least 90 calendar days prior to Facility closure or the construction activity
4. Notification of new detections of hazardous waste or hazardous constituents previously undetected – Section VIII.H.1.	Within 15 calendar days after discovery
5. Submittal of SWMU/AOC assessment report for newly identified SWMUs/AOCs – Section VIII.E.2.	Within 60 calendar days after notification from DEQ that further investigation is necessary
6. Submittal of assessment report for Deferred Units – Section VIII.G.2.	Within 60 calendar days after notification from DEQ that further investigation is necessary
7. Submittal of RFI Work Plan (or addendum to existing RFI Work Plan) – Section VIII.E.3., VIII.F.2., and VIII.G.3.	Within 90 calendar days after notification from DEQ that an RFI is required
<b>Progress Reports</b>	
8. Submittal of Progress Reports – Section XI	April 15, July 15, October 15, and January 15
<b>RCRA Facility Investigation</b>	
9. Submittal of Draft RFI Report – Sections VIII.E.3., VIII.F.2., VIII.G.3.	In accordance with the approved RFI Work Plan
10. Submittal of Final RFI Report – Section VIII.E., VIII.F., and VIII.G.	Within 45 calendar days after receipt of DEQ approval of the Draft RFI Report
11. Demonstration of Financial Assurance and Liability Insurance Coverage for completion of RCRA Facility Investigation (RFI) – Section XII.A.	Within 45 calendar days after DEQ approval of the RFI Work Plan
12. Submittal of Baseline Risk Assessment – Section VIII.E., VIII.F., and VIII.G.	Within 90 calendar days after notification by DEQ that a Baseline Risk Assessment is required
13. Demonstration of Financial Assurance and Liability Insurance Coverage for completion of the Baseline Risk Assessment Work Plan – Section XII.A.	Within 45 calendar days after DEQ approval of the Baseline Risk Assessment Work Plan

**Interim Measures**

14. Submittal of an Interim Measures Work Plan for any SWMU or AOC that poses an immediate threat to human health or the environment – Section VIII.E., VIII.F., and VIII.G.	Within 30 calendar days after notification by DEQ that an Interim Measure is required
15. Submittal of Interim Measures Final Report	Within 45 calendar days after completion of Interim Measures
16. Demonstration of Financial Assurance and Liability Insurance Coverage for implementation of Interim Measures – Section XII.A.	Within 45 calendar days after DEQ approval of the Interim Measures Work Plan

**Corrective Measures Study**

17. Submittal of CMS Work Plan – Section VIII.E., VIII.F., and VIII.G.	Within 90 calendar days after notification by DEQ that a CMS is required for any SWMU/AOC
18. Demonstration of Financial Assurance and Liability Insurance Coverage for the Corrective Measures Study – Section XII.A.	Within 45 calendar days after DEQ approval of the Corrective Measures Study Work Plan
19. Submittal of the Draft Corrective Measures Study Report – Section VIII.E., VIII.F., and VIII.G.	In accordance with the approved Corrective Measures Study Work Plan
20. Submittal of the Final Corrective Measures Study Report – Section VIII.E., VIII.F., and VIII.G.	Within 45 calendar days after receipt of DEQ approval of the draft Corrective Measures Study Report
21. Submittal of Detailed Written Cost Estimates – Section XII.B.2.	Within 60 calendar days after notification by DEQ of the selected groundwater corrective measures in accordance with Section XII.B.2.
22. Submittal of Draft Financial Assurance for Mechanisms in Section XII.1.a. through XII.1.e.	Within 60 calendar days after notification by DEQ of the selected groundwater corrective measures in accordance with Section XII.C.2.
23. Submittal of Financial Assurance for Mechanism in Section XII.1.f.	Within 60 calendar days after notification by DEQ of the selected groundwater corrective measures in accordance with Section XII.C.3.
24. Submittal of Finalized Financial Assurance for Mechanisms in Section XII.1.a. through XII.1.e.	Within 30 calendar days after receipt of DEQ approval of the draft Financial Assurance and Cost Estimates in accordance with Section XII.C.2.

**Corrective Measures Implementation**

25. Submittal of CMI Work Plan – Section VIII.B.1.a., VIII.E., VIII.F., and VIII.G.	Within 90 calendar days after receipt of DEQ's Decision Document
26. Submittal of CMI Certification Report – Section VIII.B.3.a.	Within 60 calendar days after completion of Corrective Measures
27. Deed Notices / Deed Restrictions recorded in accordance with State Law for SWMUs/AOCs with waste left in place – Section VIII.B.1.c.	In accordance with the schedule set forth in the approved CMI Work Plan
28. Submittal of Documentation / Certification of Deed Notices / Deed Restrictions to DEQ – Section VIII.B.1.c.	In accordance with the schedule set forth in the approved CMI Work Plan
29. Submittal of Survey Plat to local zoning authority, DEQ, and County Planner – Section VIII.B.1.c.iii.	Within 60 calendar days after DEQ's approval of completion of Facility-Wide Corrective Measures

**APPENDIX D**

**INDEPENDENT GROUNDWATER CORRECTIVE MEASURES  
COMPLETION CERTIFICATION**

**GROUNDWATER CMI CERTIFICATION REPORT**

LPI Billings Facility  
Billings, Montana

November 2025



# Olympus Technical Services, Inc.

December 9, 2025

Denise Kirkpatrick  
Montana Department of Environmental Quality  
PO Box 200901  
Helena, MT 59620

Re: Certification of Completion for the Groundwater SWMU-7 (Site-wide Groundwater)  
Corrective Measures  
Loveland Products, Inc. Facility – 1525 Lockwood Road, Billings, MT 59101  
Olympus Work Order No. C3314

Dear Ms. Kirkpatrick:

This letter serves as the registered professional engineer's certification to the Montana Department of Environmental Quality (DEQ) that the Groundwater Corrective Measures Implementation (CMI) for Solid Waste Management Unit 7(SWMU-7) at the referenced facility has been completed according to the Final Groundwater CMI Workplan (Rubik, 2017) and the 2015 Corrective Action Order on Consent (CAO) MHWCAO-15-01 (DEQ, 2015). SWMU-7 addresses Site-wide groundwater issues at the Loveland Products, Inc. (LPI) Facility (Site).

The certification review included reviewing the Final Groundwater CMI Work Plan (Rubik, 2017), Groundwater Corrective Measures Implementation (CMI) Certification Report (Rubik, 2025), the 2015 Corrective Action Order on Consent (CAO) MHWCAO-15-01 (DEQ, 2015), and supporting documents pertinent to SWMU-7 referenced in these reports.

## **Final Groundwater CMI Work Plan Review**

The objective of the CMI Work Plan was to define the procedures to implement the groundwater corrective measures selected by DEQ which include 1) institutional controls, 2) long-term groundwater monitoring and sampling for monitored natural attenuation (MNA), and 3) enhanced bioremediation using in-situ oxygen curtain (iSOC®) technology.

The portions of the CMI work plan that are relevant to SWMU-7 were reviewed and these sections are summarized in the sections below.

### Facility Description and Background

The facility formerly manufactured herbicides including 2,4-D, MCPA, MCPP, dicamba, glyphosate, and fluroxypyr. Between 1979 and 1985, 2,4-D-contaminated wastewater from the herbicide formulation and manufacturing process was discharged to three surface impoundments on-site to allow evaporation of water and concentration of sludge. Sixteen SWMUs and 14 Areas of Concern (AOCs) were identified in a visual site inspection and RCRA facility assessment conducted by the US EPA in 1990. A hazardous waste permit was issued to LPI in 1992.

In 1992, a Phase I RCRA Facility Investigation (RFI) identified chemical releases to soil and groundwater at several SWMUs and AOCs that required further investigation. In 1992 and 2002, Phase II RFIs were completed to further evaluate the lateral and vertical extent of COPCs

associated with select SWMUs and AOCs. Human Health Risk Assessments (HHRA) were completed in 2002, 2004, and 2005 to evaluate potential health risks to humans and ecological receptors from potential groundwater exposure. Groundwater corrective measure options were presented in corrective measure reports issued in 2012 and 2013.

Previous groundwater remedial actions included:

- In 1983, a groundwater remediation system was installed with wells and pumps to remove and treat herbicide-impacted groundwater with carbon to remove 2,4-D and phenols and re-inject the treated water through on-site injection wells. The system operated from 1983 to 1987.
- In 1986, LPI closed the surface impoundments by removing standing liquid, stabilizing the bottom sludge with lime and fly ash, and capping impoundments with polyethylene liner, sand, and compacted gravel. The closure was certified by DEQ in 1987. An asphalt cap was added to the cover in 1991.
- From 1987 to 1996, an in-situ groundwater bioremediation system, including recovery, pumping, and injection wells, was designed to control groundwater flow and aerate groundwater to enhance biological degradation. The system was shut down due to operational issues (iron buildup/well plugging).
- In 1996, a groundwater recovery system was installed that included pumping wells, an infiltration system, and a seasonal sprinkling/irrigation system. The system was operated from 1996 until 2003. The system was shut down due to concerns of COPC redistribution in groundwater.
- In 2008, a pilot study was completed to evaluate the effectiveness of enhanced aerobic degradation on dissolved-phased COPC by increasing dissolved oxygen (DO) availability via down-well iSOC® technology. Results indicated a reduction in COPC concentrations in groundwater, including arsenic, where iSOC® units were installed.
- In 2012, an excavation of former closed/capped SWMU-6 surface impoundments was completed. This included removal of solidified sludge, lime, and fly ash to an off-site hazardous waste permitted landfill. Surrounding soil with 2,4-D concentrations exceeding industrial soil cleanup levels were excavated and disposed off-site. The areas were backfilled to grade for construction of a DEQ approved warehouse in the former location of surface impoundments based on HHRA results.

### Chemicals of Potential Concern

The Chemicals of Potential Concern (COPCs) identified at the Site include:

- dichlorophenoxyacetic acid (2,4-D)
- 3,6-dichloro-2-methoxybenzoic acid (dicamba)
- 2-methyl-4-chlorophenoxyacetic acid (MCPA)
- 2-(2-methyl-4-chlorophenoxy) propionic acid (MCPP)
- Clopyralid
- Picloram
- Diallate

- Triallate
- Arsenic
- Total Phenolics

### Objectives of Corrective Measures

The stated objectives of the corrective measures outlined in the CMI work plan are to:

- Prevent unacceptable exposures to human health and the environment from impacted groundwater, and
- Reduce groundwater contamination to levels that meet cleanup goals.

The cleanup goals for groundwater are the most current water quality standards found in Circular DEQ-7 Montana Numeric Water Quality Standards. If Montana water quality standards do not exist for specific COPCs, the most current value in the following hierarch were used: EPA Regional Screening Levels (RSLs) for Tap Water, Safe Drinking Water Act MCLs, and site-specific risk-based concentrations.

### Corrective Measures Implementation

The purposes of the long-term groundwater monitoring program are to monitor COPC concentrations and distribution and ensure that conditions do not change in a manner that inhibits COPC degradation through natural attenuation. Natural attenuation is the reliance on naturally-occurring processes such as biodegradation, retardation, and dilution to reduce concentrations of COPCs in groundwater over time.

An evaluation of the existing monitoring well network was completed to identify wells that provide representative and useful data for MNA. Ninety wells had been installed between 1981 and 2012. A total of 58 wells had previously been abandoned and an additional 21 wells were recommended to be abandoned. At the time of the CMI work plan, there was a network of 32 wells, of which 21 were recommended for abandonment, leaving a network of 11 monitoring wells. Four new wells were recommended to be installed. This left 12 on-site wells for long-term MNA monitoring. Additionally, there are three monitoring wells on an adjacent parcel to the north; however, these wells were inaccessible at the time the CMI work plan was developed as a result of no access agreement with a private property owner. These wells were retained as a contingency in case COPCs are detected in monitoring wells along the downgradient Site boundary.

The groundwater monitoring and sampling plan included semi-annual monitoring of the 12 monitoring wells in the network in the second and fourth calendar quarters according to the approved Sampling and Analysis and Quality Assurance Plan (SAP/QAPP). The monitoring parameters included the ten COPCs listed above, DO, temperature, specific electrical conductance (SEC), oxidation reduction potential (ORP), pH, and depth to groundwater.

The CMI work plan included periodic localized enhanced bioremediation using iSOC® technology to enhance aerobic biodegradation process with the addition of oxygen. The facility's iSOC® system consists of an inline filter, a 250-cubic foot compressed oxygen cylinder, a gas regulator, and associated down-well tubing. The iSOC® system was proposed to be rotated among wells as necessary to increase DO concentrations to create favorable conditions for

aerobic degradation of organic COPCs, with a provision for purchase of an iSOC® diffuser, if directed by DEQ.

### **Groundwater Corrective Measures Implementation (CM) Certification Report Review**

The stated objective of the groundwater CMI certification report is to certify that the Site-wide groundwater corrective measures for the Site have been implemented and completed in accordance with the 2017 Final Groundwater Corrective Measures Implementation Work Plan.

Semi-annual groundwater monitoring has been completed at the Site since 2016 to:

- Evaluate Site-wide groundwater quality by comparing COPC concentrations to DEQ-7 standards (or the EPA RSL for diallate until the DEQ-7 standard was established in 2019);
- Identify wells where iSOC® technology was required to reduce COPC concentrations to below the water quality standards;
- Verify COPC concentrations were consistently below the water quality standards; and
- Monitor natural attenuation to confirm COPCs in the groundwater beneath the Site do not present a risk to health and the environment.

Based on our review of the CMI certification report, historic potentiometric data show that the groundwater flows consistently to the north toward the downgradient wells and the monitoring well network appears to have sufficient wells relative to the historic SWMUs and AOCs to detect the COPCs.

The CMI certification report states that since at least 2016, the only COPC that have exceeded the current DEQ-7 standards are dilate, MCPA, MCPP, and arsenic, as summarized below:

- Diallate was only detected once at a concentration exceeding the DEQ-7 standard in well MW-3 in November 2019. Tables 3 and 4 and trend graphs in Appendix B of the CMI certification report show that dilate concentrations have not exceeded the DEQ-7 standard in semi-annual sampling of the well network since 2019.
- MCPA concentrations have periodically exceeded the DEQ-7 standard in well MW-1 (once in November 2018), MW-2 (once in August 2020), MW-3 (once in November 2021), M-5/MW5-R (once May 2019), MW-7 (once in May 2008), OBS-1 (once in May 2017), and OBS-2 (once in July 2014). An iSOC® system was operated in well OBS-1 from 2017 until 2020. Tables 3 and 4 and trend graphs in Appendix B of the CMI certification report show that MCPA concentrations have stabilized at concentrations less than the DEQ-7 standard since the reported exceedances.
- MCPP was only detected once at a concentration exceeding the DEQ-7 standard in well OBS-1 in May 2019. Tables 3 and 4 and trend graphs in Appendix B of the CMI certification report show that MCPP concentrations have not exceeded the DEQ-7 standard in semi-annual sampling of the well network since 2019.
- Arsenic concentrations have periodically exceeded the DEQ-7 standard in wells OBS-1 (prior to May 2023), OBS-2 (prior to August 2020), MW-3 (once in November 2019), and

contingency well M-3BA (prior to November 2013). Tables 3 and 4 and trend graphs in Appendix B of the CMI certification report show that arsenic concentrations have not exceeded the DEQ-7 standard since the reported exceedances shown above.

### Closure Certification

Based on my review of the pertinent documents, to the best of my knowledge, the Site-wide groundwater corrective measures for the site have been completed in accordance with the 2017 Final Groundwater CMI Work Plan (Rubik, 2017) and the 2015 Corrective Action Order on Consent (CAO) MHWCAO-15-01 (DEQ, 2015).

### References

DEQ, 2015, Corrective Action Order on Consent HHWCAO-15-01. 2015.

Rubik, 2017, Final Groundwater Corrective Measures Implementation Work Plan, Loveland Products, Inc., Billings, Montana, January 12.

Rubik, 2025, Groundwater Corrective Measures Implementation (CMI) Certification Report, Loveland Products, Inc., Billings, Montana, November 19.

Olympus appreciates the opportunity to assist you with this project. Please contact me at (406) 443-3087 or via email at [krauch@olytech.com](mailto:krauch@olytech.com) with any questions.

Sincerely,  
Olympus Technical Services, Inc.



Kevin S. Rauch, P.E.  
Vice President/Principal Engineer

Reviewed by

Ethan J. Perro, PG.