



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

**Department of Environmental
Conservation**

Division of Spill Prevention and Response
Contaminated Sites Program

610 University Ave.
Fairbanks, Alaska 99709-3643
Main: 907.451.5715
Fax: 907.451.5105

File: 140.26.019

April 14, 2014

Penny Adler
ADOT&PF
Northern Region Aviation Leasing
2301 Peger Road
Fairbanks, AK 99709

Bill Heubner
National Park Service
240 W. 5th Avenue
Anchorage, AK 99501

Re: Revised Decision Document: NPS Gulkana Airport
Corrective Action Complete Determination – Institutional Controls

Dear Ms. Adler and Mr. Heubner:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the National Park Service (NPS) Gulkana Airport site. This decision letter memorializes the site history, cleanup actions, and specific conditions required to effectively manage remaining contamination. This revised decision document replaces the February 11, 2014 decision document by clarifying the 2nd paragraph of the ADEC Decision section on page 5. No further remedial action will be required as long as compliance with these conditions is maintained.

Site Location:

Gulkana Airport, Block 21, Lot 7A
Section 5, Township 4 North,
Range 1 West, Copper River Meridian

DEC Site Identifiers:

File No: 140.26.019

Hazard ID: 24819

Regulatory Authority for Determination:

18 AAC 75 and 18 AAC 78

Landowner:

Alaska Department of Transportation & Public Facilities
Northern Region Aviation Leasing
2301 Peger Road
Fairbanks, AK 99709

Operator:

National Park Service – Alaska Regional Office
240 W. 5th Avenue
Anchorage, AK 99501

Wrangell-St. Elias National Park & Preserve
P.O. Box 439
Copper Center, AK 99573

Site Description and Background

As part of the Gulkana Operations Center for the Wrangell-St. Elias National Park & Preserve, the NPS leases Lot 7, Block 21 at the Gulkana Airport from the Alaska Department of Transportation & Public Facilities (ADOT&PF). NPS facilities at the Gulkana Airport consist of a hangar and support buildings.

Three regulated 3,000-gallon underground storage tanks (USTs) were installed at the site in 1978. One UST contained Jet-B fuel and two contained Avgas. The USTs were removed in 1998. During removal activities, petroleum contaminated soil was encountered and approximately 50 cubic yards of contaminated soil was removed. Results from characterization activities show that contaminated soil remains in place under the asphalt tarmac.

Subsurface soils at the Gulkana Airport consist of clay, silt, till, sand, and local beds of gravelly sand and sandy gravel. These deposits are estimated to be at least 500 feet thick and permafrost is present to at least 100 feet below ground surface. Surface soils are typically poorly drained with thick surface horizons of organic matter and mottled clay subsurface horizons.

Groundwater in the area is generally quite saline and found at depths of greater than 200 feet in unconsolidated deposits below the permafrost. Supra-permafrost groundwater may occur intermittently above frozen soil and clay lenses. This localized shallow supra-permafrost groundwater is not used for drinking water. Consumption is undesirable due to the taste and odor of the water. Drinking water is supplied to the airport from an off-site source by commercial water truck.

Contaminants of Concern

The following contaminants of concern were identified during the course of the site investigations summarized in the Characterization and Cleanup Activities section of this decision letter:

- Gasoline Range Organics (GRO)
- Diesel Range Organics (DRO)
- Benzene
- Toluene
- Ethylbenzene
- Xylenes

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Tables B1 and B2, under 40-inch precipitation zone, migration to groundwater. The default groundwater cleanup levels for this site are established in 18 AAC 75.345, Table C.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)	Groundwater (mg/L)
GRO	300	2.2
DRO	250	1.5
Benzene	0.025	0.005
Toluene	6.5	1.0
Ethylbenzene	6.9	0.7
Xylenes	63	10

mg/kg – milligrams per kilogram
mg/L – milligrams per liter

Characterization and Cleanup Activities

In 1998, Montauk Environmental Engineering (Montauk) removed the three 3,000-gallon USTs and associated piping. During excavation activities Montauk removed approximately 50 cubic yards of petroleum contaminated soil and transported it to a long term stockpile in Glennallen. At a depth of 9 feet, a supra-permafrost groundwater layer flooded the excavation, preventing the removal of any remaining contaminated soil. The excavation was lined with plastic and backfilled with clean soil, and re-paved with asphalt as part of the tarmac. Stockpiled soil was transported to Alaska Soil Recycling in Anchorage for treatment.

To determine the extent of the remaining contamination, Shannon & Wilson, Inc. performed release investigations in 1999. A total of 10 soil borings and 4 well points were installed. Soil and groundwater samples were analyzed for GRO, DRO, and benzene, toluene, ethylbenzene, and xylenes (BTEX). Analytical results indicated that GRO, DRO, and BTEX remain above the cleanup level within the footprint of the former excavation to a depth of 15 feet. DRO and benzene were detected above the groundwater cleanup level in the well points within the former excavation footprint. Based on the characterization results, Shannon & Wilson estimated that up to 250 cubic yards of contaminated soil remained in place, limited to the area immediately surrounding the former USTs.

In 2011, Oasis Environmental installed 6 soil borings and 3 temporary monitoring wells to determine current site conditions. Soil and groundwater samples were analyzed for GRO, DRO, BTEX, polynuclear aromatic hydrocarbons (PAHs), ethylene dibromide (EDB), and lead. Results for the PAHs, EDB, and lead were below the cleanup levels or non-detect. EDB was non-detect in soil, however the detection limits were greater than the migration to groundwater cleanup level. EDB was not detected in the supra-permafrost groundwater, therefore it is not considered a contaminant of concern at this site.

Maximum results for GRO, DRO, and BTEX are presented in the following tables:

Table 2 – Maximum Soil Sample Results (2011)

	Cleanup Level (mg/kg)	Maximum Result (mg/kg)	Boring ID and Location	Depth
GRO	300	5270	BH-12, north west corner of former excavation	11-12 feet
DRO	250	315	BH 14, east side of former excavation	14-15 feet
Benzene	0.025	51.8	BH-12, north west corner of former excavation	11-12 feet
Toluene	6.5	130	BH-12, north west corner of former excavation	11-12 feet
Ethylbenzene	6.9	25.5	BH-12, north west corner of former excavation	11-12 feet
Xylenes	63	102	BH-12, north west corner of former excavation	11-12 feet

Table 3 – Maximum Supra-Permafrost Groundwater Results (2011)

	Cleanup Level (mg/L)	Maximum Result (mg/L)	Well point ID and Location
GRO	2.2	0.296	WP-5, north west corner of former excavation
DRO	1.5	non-detect (0.417)	WP-5, north west corner of former excavation
Benzene	0.005	0.0131	WP-5, north west corner of former excavation
Toluene	1.0	0.0112	WP-5, north west corner of former excavation
Ethylbenzene	0.7	0.00335	WP-5, north west corner of former excavation
Xylenes	10	0.00708	WP-5, north west corner of former excavation

Characterization activities conducted in 1999 indicated that contaminants above the cleanup level remained within the footprint of the former excavation area. Results from 2011 confirmed that contamination remains on site above the cleanup level. The remaining contamination is limited to the area immediately surrounding the former USTs and has not migrated.

Exposure Pathway Evaluation

Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be one of the following: De-Minimis Exposure, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included below.

Table 4 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Contaminated soil was removed to a depth of 9 feet. No surface staining was observed during the UST removal actions.
Sub-Surface Soil Contact	Exposure Controlled	GRO is present within the former excavation area above the ingestion cleanup level. The former excavation was backfilled with clean fill and an asphalt tarmac covers the area.
Inhalation – Outdoor Air	Exposure Controlled	Benzene, xylenes, and GRO are present within the former excavation area above the inhalation cleanup levels. The former excavation was backfilled with clean fill and an asphalt tarmac covers the area.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	The hangar building is 50 feet from the former tank area. Results from a soil boring installed between the former tank area and the building were below cleanup levels.
Groundwater Ingestion	Exposure Controlled	Groundwater in this area is at approximately 250 feet, and is usually too saline for consumption. Benzene is above the cleanup level in the shallow perched layer of supra-permafrost groundwater. This supra-permafrost groundwater is not currently a drinking water source, and recharge times from the temporary

		monitoring wells indicate it would be an unfeasible aquifer for drinking water. Drinking water for the airport is supplied from off-site by commercial water trucks.
Surface Water Ingestion	Pathway Incomplete	The nearest surface water body is an unnamed pond 0.5 miles from the site. Site investigation results indicate the remaining contamination is not migrating from the former excavation area.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	Contamination remaining in place is present in the sub-surface.

Notes to Table 2: "De-Minimis Exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume or concentration of remaining contamination. "Pathway Incomplete" means that in ADEC's judgment contamination has no potential to contact receptors. "Exposure Controlled" means there is an administrative mechanism in place limiting land or groundwater use, or a physical barrier in place that deters contact with residual contamination.

ADEC Decision

Petroleum contamination remains on-site in soil and supra-permafrost groundwater above approved cleanup levels; however ADEC has determined there is no unacceptable risk to human health or the environment as long as the contamination is properly managed.

The presence of known remaining contamination and the conditions that the owners and operators are subject to in accordance with this decision document will be identified by ADOT&PF on the land occupancy drawings and in the special provisions section of the lease. These conditions are as follows:

1. Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, these management conditions may not be protective and ADEC may require additional remediation and/or revised conditions. Therefore the ADOT&PF shall report to ADEC every five years to document land use, or as soon as ADOT&PF becomes aware of any change in land ownership and/or use, if earlier. The report can be sent to:

ADEC Contaminated Sites Program
 610 University Avenue
 Fairbanks, AK 99709

2. To ensure that no projects are planned without knowledge of the remaining contamination at this site, the NPS will maintain a geographic information system database identifying the location of remaining contamination. In addition, a screening question has been added to the NPS planning process for all projects asking if there is contaminated soil or groundwater located within the project area. The GIS system and planning process are described in the attached letter dated November 2013.
3. Sub-surface contamination is located under the tarmac. The tarmac must be maintained to prevent exposure to contaminated soil. If the tarmac is removed and/or the soil becomes accessible, the soil must be evaluated and contamination addressed in accordance with an ADEC approved work plan.
4. Installation of groundwater wells requires ADEC approval.

5. Any proposal to transport soil or groundwater off-site requires ADEC approval in accordance with 18 AAC 78.600(h). A "site" [as defined by 18 AAC 75.990 (115)] means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership.
6. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. Institutional controls will be removed in the future if documentation can be provided that shows cleanup levels have been met. Management conditions 5 and 6 remain in effect after ICs are removed.

This determination is in accordance with 18 AAC 78.276(f) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

Appeal

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 15 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

Please sign and return the appropriate Attachment to ADEC within 30 days of receipt of this letter. If you have questions about this closure decision, please feel free to contact me at melody.debenham@alaska.gov or (907) 451-5175.

Sincerely,



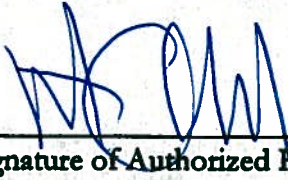
Melody Debenham
Environmental Program Specialist

Enclosures: Attachment A – Cleanup Complete – ICs Agreement Signature Page, ADOT&PF
Attachment B – Cleanup Complete – ICs Agreement Signature Page, NPS
Site Figure (Oasis 2011 Site Characterization Report, Figure 3)
November 2013 Institutional Controls Letter from NPS

cc: Superintendent, Wrangell-St. Elias National Park & Preserve (e-mail)
Sam Myers, DOT&PF (e-mail)

Attachment A: Cleanup Complete-ICs Agreement and Signature Page, ADOT&PF

The ADOT&PF agrees to the terms and conditions of this Corrective Action Complete Determination, as stated in decision letter for the National Park Service Gulkana Airport site February 12, 2014. Failure to comply with the terms and conditions of the determination may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 18 AAC 78.276(f).



Signature of Authorized Representative, Title
RP/Company Name

10.30.14

Date

R. Campbell WA Division DOT/PF

Printed Name of Authorized Representative, Title
RP/Company Name

Note to Responsible Person (RP):

After making a copy for your records, please return a signed copy of this form to the ADEC project manager at the address on this correspondence within 30 days of receipt of this letter.

Attachment II: Cleanup Complete-ICs Agreement and Signature Page, NPS

The NPS agrees to the terms and conditions of this Corrective Action Complete Determination, as stated in decision letter for the National Park Service Gulkana Airport Site February 12, 2014. Failure to comply with the terms and conditions of the determination may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 18 AAC 78.276(f).

R. Obernesser
Signature of Authorized Representative, Title
RP/Company Name

3-5-2014
Date

RICHARD OBERNESSER
Printed Name of Authorized Representative, Title
RP/Company Name

Note to Responsible Person (RP):

After making a copy for your records, please return a signed copy of this form to the ADEC project manager at the address on this correspondence within 30 days of receipt of this letter.



EXPLANATION

- BH-1 ⊕ SOIL BORING LOCATION
- B-02 ⊙ 1999 SOIL BORING LOCATION
- WP-1 ⊠ 1999 WELL POINT LOCATION

SOURCE: AERIAL PHOTO RICH_LHWY9--22--07.TIFF
 PROVIDED BY AERO-METRIC DATED 9/22/07.



DATE: JANUARY 2012
 CHKD: C.A.O.
 DRAWN: S.M.C.
 PROJ. No.: 0147057
 825 W. 8th Ave., Anchorage, AK 99501, (907) 258-4880

SITE PLAN

GULKANA HANGAR
 SITE CHARACTERIZATION REPORT
 Wrangell St. Elias National Park, Alaska





United States Department of the Interior

NATIONAL PARK SERVICE
240 W. 5th Avenue
Anchorage, Alaska 99501

A7615(AKRO-EPD)

November 19th, 2013

Diana Osborne
Alaska Department of Transportation and Public Facilities, Airport Leasing
2301 Peger Road
Fairbanks, Alaska 99709-5399

Re: Institutional Controls for Gulkana Airport Contaminated Site, Block 21, Lot 7A

Dear Ms. Osborne:

This letter is in response to our telephone conversation about the proposed Institutional Controls for the Gulkana Airport contaminated site, Block 21, Lot 7A.

Within the last year, I have been inputting all of the contaminated sites in the Alaska Region of the National Park Service in our Geographic Information System (GIS) database, in part to use this information as an Institutional Control. Depending on the amount of information known about each site, I create either a contamination plume polygon or a point (if limited information is available) that provides information about the contamination, along with access to all reports prepared on the contaminated sites.

I have provided some attachments that identify the Gulkana Airport site information in our GIS database. As you can see, the GIS record for the Gulkana site shows the approximate extents of the contamination plume and contaminant levels in each soil boring at the site. The database also provides a hypertext link that allows access to site investigation reports for more in-depth information about the contamination

In the past, one concern I had about just relying on the data in the GIS database as an Institutional Control is it is possible it would not always be consulted when planning an action (such as excavation or drilling a well) at the site. I decided that the National Environmental Policy Act (NEPA) process would be the best way to address this concern. In National Park units, planning for projects on NPS lands or on NPS leased facilities, no matter how small, is required to go through the NEPA process, whether it results in a Categorical Exclusion, or the need to prepare an Environmental Assessment or an Environmental Impact Statement. As part of this process, the Environmental Compliance Officer for the park unit must enter every project in the NPS Planning, Environment & Public Comment (PEPC) database (<http://parkplanning.nps.gov/parks.cfm>). For Alaska projects, the Team Leader for

Environmental Compliance added the following checklist question, which must be answered any time a new environmental compliance document is added to PEPC: "Are contaminated soils or contaminated groundwater in the project area? (Existing information should be available in GIS.)" An example of this checklist for a project in Denali is attached.

We feel that the site information in the GIS database, along with the screening question in PEPC constitute an effective Institutional Control and will ensure that no project is planned without knowledge of contamination at any given site. In addition, as we discussed on the phone, your Department may want to consider identifying the existence of the contamination in the lease for the property. This, in conjunction with the Building Permit process would also constitute an effective Institutional Control.

If you have any questions about this submittal, please feel free to contact me by telephone at (907)644-3384 or email at bill_heubner@nps.gov.

Sincerely,

A handwritten signature in blue ink that reads "William F. Heubner". The signature is written in a cursive style with a large initial "W".

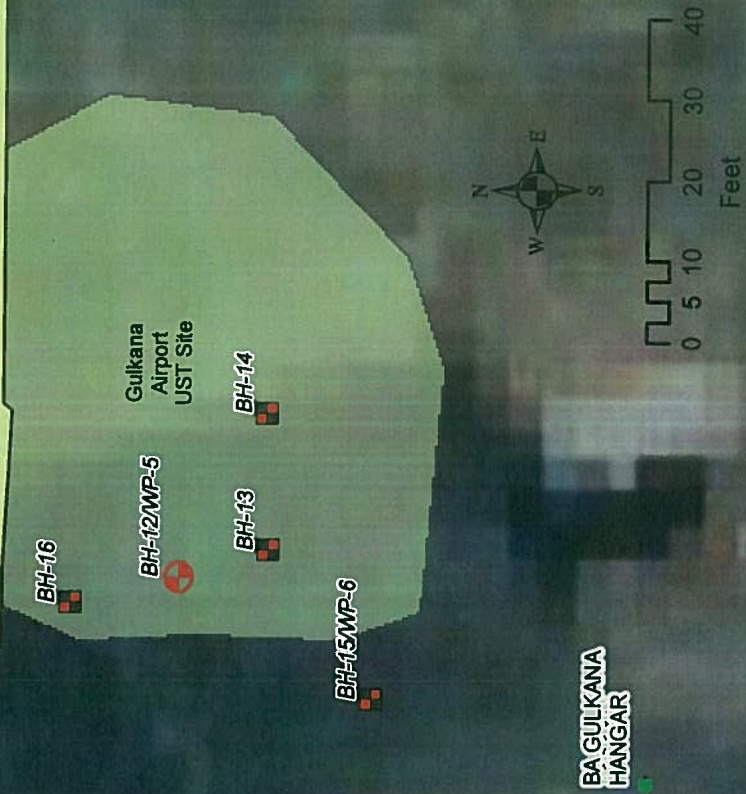
William F. Heubner, Civil Engineer

cc:
Superintendent, WRST
Facility Manager, WRST
Melody Debenham, ADEC, Contaminated Sites
Olga Stewart, Ahtna Engineering

Gulkana Airfield Contaminated Site Location

BH-17

Extensive gasoline contamination in soil with limited discontinuous groundwater contamination due to releases from UST's removed at the site in September 1998. 200-250 cy of contaminated soil remain. Oasis recommends closure w/C's



Monitoring Points

Site Name	Site Description	ADEC File No	EDL ID	Clean	Is Site
BH-17	Borehole drilled in 2011 as part of site investigation. Boring drilled to 4.5'. ND for all contaminants.	140.26.019	SAKR11	Yes	No
BH-16	Borehole drilled by Altus in August 2011, drilled to 12.5' bgs. Benzene at 4.18 mg/kg, all other constituents below cleanup levels.	140.26.019	SAKR11	No	No
BH-14	Borehole drilled August of 2011 to 15' bgs; GRO at 2,630 mg/kg, DRO at 315 mg/kg. Benzene at 32.5 mg/kg	140.26.019	SAKR11	No	No
BH-12MP-5	Borehole used as a temporary monitoring well, installed in August 2011 to 16' depth. GRO as high as 5,270 mg/kg and Benzene as high as 51.8 mg/kg detected in	140.26.019	SAKR11	<Hub>	No
BH-13	Borehole drilled BH11 to 15' bgs. Gro at 1,060 mg/kg and Benzene at 31.5 mg/kg detected.	140.26.019	SAKR11	No	No
BH-15MP-6	Borehole drilled in BH11 to 4.5' bgs. Well point installed but no water could be collected. All constituents were below cleanup levels in soil.	140.26.019	SAKR11	Yes	No

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National Park Service
Alaska Region
Department of the Interior
240 W. 5th Ave., Rm. 114
Anchorage, AK 99501

REACTORIZATION REPORT

PORT,
ELIAS NATIONAL PARK AND PRESERVE, ALASKA



Prepared by:



825 W. 8th Ave.
Anchorage, AK 99501



August, MO 20077

Site_Description	EXCESSIVE gasoline contamination in soil with limited discontinuous groundwater contamination due to releases from UST's removed at the site in September 1998. 200-250 Gy of contaminated soil remain. Oasis recommends closure w/C's
ADEC_File_No	140.26.019
EDL_ID	5AKR11
Clean	No
Contamination Type	Gasoline
Is Site Closed by ADEC	No
Contamination Plume Type	Soil
Feature_Type	Unknown
Feature_Notes	<Null>
Create_Date	9/1/1998
Edit_Date	4/4/2013
Map_Method	Digitized
Map_Source	<Null>
Map_Source_Date	<Null>
Map_Source_Scale	<Null>
Horizontal_Error	>5 Meters and <= 10 Meters
Vertical_Error	Unknown
Use_Restriction	Unrestricted
Site_Photo_1	<Null>
Site_Photo_2	<Null>
Site_Photo_3	<Null>

ERT-15AWP-6

BA GULKANA
HANGAR

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National Park Service
U.S. Department of the Interior

Denali National Park and Preserve
Date: 11/19/2013

PARK ESF ADDENDUM

Today's Date: November 19, 2013

(This form should be attached to ESF document sent to the regional director's office for signature. While you may modify this form to fit your needs, you must ensure that the form includes information detailed below and must have your modifications reviewed and approved by the regional environmental coordinator.)

PROJECT INFORMATION

Park Name: Denali National Park and Preserve
Project Title: Ghiglione Bridge Replacement
PEPC Project Number: 30627
Project Type: Capital Improvement (CI)
Project Location:
 County, State: Denali, Alaska **District, Section:** West, **Geographic Marker:** 42 (Milepost)
Project Leader: Brad Ebel

PARK ESF ADDENDUM QUESTIONS & ANSWERS

ESF Addendum Questions	Yes	No	N/A	Data Needed to Determine/Notes
Road Travel Permit requested?	Y			
Helicopter Landing requested?		N		
Backcountry camping requested?		N		
Research Permit requested?		N		
MR/MT Required?		N		
404 Permit Required?	Y			
Fish Habitat Permit Required?		N		
Archy Survey Required?	Y			
106 to SHPO Required?	Y			
Are contaminated soils or contaminated groundwater in the project area? (Existing information should be available in GIS)		N		