WestLand Resources, Inc.
Engineering and Environmental Consultants

June 1, 2015

Mr. Tyler Bintrim, Regulatory Project Manager
U.S. Army Corps of Engineers, Pittsburgh District
Federal Building, 20th Floor
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222

Re: FORMER SATRALLOY SITE CLEAN WATER ACT SECTION 404 NATIONWIDE PERMIT PRECONSTRUCTION NOTIFICATION
WESTLAND PROJECT NO. 1271.03

Dear Mr. Bintrim:

On behalf of Cyprus Amax Minerals Company (Cyprus), WestLand Resources, Inc. (WestLand) is pleased to present the Preconstruction Notification, and supporting documentation, for filling certain waters of the United States at the Former Satralloy Site (the Site) in Jefferson County, Ohio. The enclosed package includes:

- Application for the Department of the Army Permit (Engineering Form 4345), documenting that the proposed Project activities are appropriately covered under Clean Water Act Section 404 Nationwide Permit No. 38, Cleanup of Hazardous Waste.
- Preliminary Jurisdictional Determination Form and Analysis Area figure, identifying all aquatic features within the Project Area that could be affected by the proposed Project.
- Biological Evaluation, documenting that the proposed Project would not affect species identified by the U.S. Fish and Wildlife Service as protected by the Endangered Species Act.
- Ohio Historical Society concurrence letter, documenting that the proposed Project would not affect historic resources protected by the National Historic Preservation Act.

Please note that we have prepared the Preliminary Jurisdictional Determination based on your email to me on November 17, 2014, which described your requested revisions to the Request for Jurisdictional Determination that WestLand submitted to the Corps on June 12, 2014. You requested that another stream channel be added and suggested that we utilize the Preliminary Jurisdictional Determination approach, including a revised review area that focuses on the area encompassed by the proposed Project activities rather than the entire site. The enclosed Preliminary Jurisdictional Determination includes these changes.

If you have any questions or require additional information, please do not hesitate to call.

Respectfully,
WestLand Resources, Inc.

Christopher Rife
Senior Project Manager

CER:lyg
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Attachment (s): Application for the Department of the Army Permit (Engineering Form 4345)
Preliminary Jurisdictional Determination Form and Analysis Area figure
Biological Evaluation, Former Satralloy Site.
Ohio Historic Society concurrence letter

cc: Barbara Nielsen, Cyprus Amax Minerals Company
James Lynch, Gallagher & Kennedy
Shane Farolino, Roetzel & Andress
Lee Holder, Golder Associates Inc.

U.S. ARMY CORPS OF ENGINEERS

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved - OMB No. 0710-0003 Expires: 31-AUGUST-2013

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - William Middle - E. Last - Cobb	First - Christopher Middle - E. Last - Rife
Company - Cyprus Amax Minerals	Company - WestLand Resources, Inc.
E-mail Address - William_Cobb@FMI.com	E-mail Address - CRife@westlandresources.com
6. APPLICANT'S ADDRESS:	**9. AGENT'S ADDRESS:**
Address- 333 North Central Avenue	Address- 4001 East Paradise Falls Drive
City - Phoenix State - AZ Zip - 85004 Country - USA	City - Tucson State - AZ Zip - 85012 Country - USA
7. APPLICANT'S PHONE NOs. w/AREA CODE	**10. AGENTS PHONE NOs. w/AREA CODE**
a. Residence b. Business (602)366-7826 c. Fax	a. Residence b. Business (520)206-9585 c. Fax (520)206-9518

STATEMENT OF AUTHORIZATION

11. I hereby authorize, Christopher Rife to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

WB Cobb — SIGNATURE OF APPLICANT

5/29/15 — DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

Former Satralloy Site Interim Actions and Remedial Investigation/Feasibility Study

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
Features D, E, and K, which discharge into Cross Creek	Address 4243 County Road 74 (Gould Road)
15. LOCATION OF PROJECT Latitude: °N 40.310 Longitude: °W 80.671	City - Mingo Junction State- OH Zip- 43938

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality Cross Creek Township

Section - 8 Township - 6 North Range - 2 West

17. DIRECTIONS TO THE SITE

From central Mingo Junction, Ohio, proceed south on Commercial Avenue. Continue straight on Clifton Avenue as it bears to the right (west) and passes under State Highway 7. Clifton Avenue becomes County Road 74 (Gould Road) at this point. Follow County Road 74 approximately 4.7 miles to the site. Note that in Gould, 2.8 miles from Mingo Junction, County Road 74 intersects with County Road 28 at a T. Turn left at this point to continue on County Road 74. Pass over Cross Creek on a bridge just south of Gould, and continue on County Road 74 to another T intersection, with Scott Featner Road. Turn right, pass over Cross Creek on another bridge and through the settlement of Kolmont. The site is on the right approximately 0.8 mile past the bridge. Access to the site is restricted by 24-hour security.

18. Nature of Activity (Description of project, include all features)

See Attachment, Block 18.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

See Attachment, Block 19.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

See Attachment, Block 20.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Soil: 2,700 cy		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.12 (Feature D) + 0.14 (Feature E) + 0.06 (Feature K) = 0.32 ac; filled by front-end loader

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

The Interim Actions and Remedial Investigation/Feasibility Study activities have been designed to meet the requirements of the Consent Order for Preliminary Injunction described in Block 19. Filling Features D, E, and K is needed to protect human health and the environment by removing physical and chemical hazards, and managing stormwater flow. The Project Area has been defined to avoid other potentially jurisdictional areas that may be present within the Property. Compensatory mitigation should not be required, as the proposed activities are likely to improve surface water quality by redirecting flow to minimize contact with potential contaminants.

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- The waterbodies (Features D, E, and K) that will be filled for the project are entirely within the Applicant's Property.

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
WB Cobb	5/29/15	[signature]	6/01/15

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Block 18: Nature of Activity

The proposed activities involve placing fill material in three jurisdictional areas, identified as Features D, E, and K, to support the overall project described in Block 19.

Feature D is a 0.12-acre wetland that has become established above a processing pond for the former industrial activities; overflow from the wetland currently discharges to Cross Creek via a culvert under County Road 74. Existing vegetation will be excavated from this wetland, and the wetland depression filled with soil or slag from adjacent areas on the site. The surface will be graded to promote stormwater sheet flow across the lowland plant site to the existing drainage ditch that runs along the west side of County Road 74. From there, runoff will flow through an existing culvert under County Road 74, ultimately discharging to Cross Creek.

Feature E is a constructed ditch conveying stormwater flow from the two mill building roofs and adjacent uplands to a culvert that currently reports to Feature D. This ditch is 582.4 feet long and varies in width from 3 to 15 feet, with an area of 0.14 acre. A culvert near the midpoint of the ditch conveys flow under a road; a drop structure at the north end of this culvert drains into another culvert trending to the southeast, reporting to Feature D. Feature E will be backfilled with soil or slag. Prior to filling, a pipe will be placed in Feature E to convey flow from the building drainage systems to the culvert drop structure. The backfilled feature will be graded to direct stormwater away from the buildings. Stormwater drainage from adjacent areas, which previously flowed into the Feature E, will sheet flow across the plant site to the existing drainage ditch that runs along the west side of County Road 74, as described above for Feature D, ultimately discharging to Cross Creek.

Feature K is a manmade ditch conveying intermittent flow from a culvert under the upper rail spur (which traverses an upland slope) to another culvert in the lowland plant site drainage system, ultimately discharging to Cross Creek. The ditch is 214.5 feet long and varies in width from 2 to 16 feet, with an area of 0.06 acre. The ditch will need to be filled to allow construction of an access road to support the interim actions and site investigation activities. A pipe will be installed in the ditch alignment to connect the existing upstream and downstream culverts, to facilitate drainage of stormwater down the slope and under the new access road. The ditch will then be backfilled with soil or slag and contoured to match the adjacent ground surface.

A Biological Evaluation of the project, attached, documents the potential presence of such species and the project’s potential to affect them. The proposed activities will not affect species listed, proposed for listing, or candidates for listing as threatened or endangered by the US Fish & Wildlife Service under their authority through the Endangered Species Act. The proposed activities will also not affect any cultural resources listed or eligible for listing on the National Register of Historic Places, as documented in the attached letter from the Ohio State Historic Preservation Office.

Block 19: Project Purpose

The purpose of the project is to conduct interim actions and a Remedial Investigation/Feasibility Study as required by a Consent Order for Preliminary Injunction (Consent Order) with the Ohio Environmental Protection Agency (OEPA). The Consent Order requires that physical and chemical hazards at the site are addressed to protect human health and the environment. As described in Blocks 18 and 20, each of the proposed fill activities is a component of the required activities defined in the project Work Plan developed for and approved by the OEPA. The proposed activities qualify for coverage under Nationwide Permit No. 38, Cleanup of Hazardous

Waste, based on the requirements of the Consent Order with OEPA Agency. Mitigation is not proposed because the loss of these low quality features will improve water quality in Cross Creek, an overall net benefit of the project that is required by the Consent Order.

Block 20: Reason for Discharge

- Feature D will be filled to promote unimpeded stormwater sheet flow across the site and eliminate a potential source of infiltration. The redirected stormwater flow will improve water quality.

- Feature E will be filled to reduce physical hazards associated with a steep slope above the jurisdictional area. The flattened slope will improve physical safety.

- Feature K will be filled and will include a culvert to provide unimpeded drainage across the site and build a road to facilitate interim action and site investigation activities. The redirected stormwater flow will improve water quality, and the new road will allow for site investigation activities.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office | File/ORM # 2005-2397 | PJD Date:

State | City/County Jefferson County, Ohio

Nearest Waterbody: Cross Creek

Location: TRS, LatLong or UTM: Township 06 North, Range 02 West of the Ohio River Survey, Portions of Sections 2, 8, and 9

Name/ Address of Person Requesting PJD: Barbara K. Nielsen, Cyprus Amax Minerals Company, 333 North Central Avenue, Phoenix, Arizona 85004

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters: 797 linear ft | width 0.2 acres | Stream Flow: Ephemeral

Wetlands: 0.12 acre(s) | Cowardin Class: Riverine

Name of Any Water Bodies on the Site Identified as Section 10 Waters: Tidal: | Non-Tidal:

☐ Office (Desk) Determination
☑ Field Determination: Date of Field Trip: Nov 11, 2014

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: WestLand Resources, Inc.
- ☑ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☐ U.S. Geological Survey Hydrologic Atlas:
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite quad name:
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation:
- ☐ National wetlands inventory map(s). Cite name:
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is:
- ☑ Photographs: ☑ Aerial (Name & Date): NAIP 2013
  - ☐ Other (Name & Date):
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and Date of Regulatory Project Manager (REQUIRED)

Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable) 6/1/15

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office		File/ORM #	2005-2397	PJD Date:	
State		City/County	Jefferson County, Ohio	Person Requestinq PJD	Barbara K. Nielsen

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
D	40.3085° N	80.6075° W	Palustrine, forested	0.12 acre	Non-Section 10 wetland
E	40.3099° N	80.6718° W	Riverine	0.14 acre	Non-Section 10 non-wetlanc
K	40.3119° N	80.6698° W	Riverine	0.06 acre	Non-Section 10 non-wetlanc

Notes:

Path: M:\Jobs\1200's\1271.03\ENV\JD\MXD\Fig01_SatralloyAnalysisArea.mxd

Date: 5/26/2015 User: rudyq

*** * * * P R E L I M I N A R Y (RGL 08-02) * * * ***

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Pittsburgh District

Application No. LRP -_____-_____-_____

Boundary of area surveyed for jurisdictional waters of the United States (Analysis Area)

Ordinary High Water Mark

Potential Waters of the United States

Potentially Jurisdictional Wetland Boundary (If legend is blank no wetlands occur in survey area)

_____ Site Visit (Y/N) Date:_____

300' Scale *January 1, 2013* Date of Photograph

_____ Corps Project Manager

Sheet *1* of *1*

*** * * * P R E L I M I N A R Y (RGL 08-02) * * * ***

Legend

- Culvert
- Potential Waters of the United States
- Potentially Jurisdictional Wetland Boundary
- Project Area
- Property Boundary
- USGS Drainage Feature

N

0 300 600 Feet

0 100 200 Meters

T06N, R02W, Portion of Sections 2, 8 & 9,
Jefferson County, Ohio,
Steubenville West USGS 7.5' Quadrangle
Image Source: NAIP 2013

WestLand Resources, Inc.
Tucson • Phoenix • Flagstaff
1750 S. Woodlands Village Blvd., Suite 150
Flagstaff, Arizona 86001 (928) 225-2218

FORMER SATRALLOY SITE

Preliminary Jurisdictional Delineation

PROJECT AREA

Figure 1

BIOLOGICAL EVALUATION

FORMER SATRALLOY SITE
JEFFERSON COUNTY, OHIO

Prepared for:
CYPRUS AMAX MINERALS COMPANY
333 North Central Avenue
Phoenix, Arizona 85004

Prepared by:

WestLand Resources, Inc.
Engineering and Environmental Consultants

4001 E. Paradise Falls Drive
Tucson, Arizona 85712
(520) 206-9585

June 2015
Project No. 1271.03

TABLE OF CONTENTS

FIGURES

TABLES

(follow text)

APPENDICES

1. INTRODUCTION

The former Satralloy site near Steubenville, Ohio has been subjected to a variety of mining and industrial uses over its history, and Cyprus Amax Minerals Company (Cyprus) is conducting an investigation of past environmental impacts to the site (the proposed Project). WestLand Resources, Inc. (WestLand), has been retained to evaluate the site for the presence or potential presence of threatened or endangered species of wildlife or plants. The purpose of this Biological Evaluation (BE) is to evaluate the potential effects of the proposed Project (described in ***Section 4***) on federally listed species and designated critical habitats. For the purposes of this report "special-status species" are defined as those species designated by the U.S. Fish and Wildlife Service (USFWS) as Endangered, Threatened, Proposed for listing, or Candidates for listing.

2. LOCATION AND CONTACT INFORMATION

The former Satralloy site (the Property) is located southwest of Steubenville in Jefferson County, Ohio (***Figure 1***). The approximately 333-acre Property is in the Cross Creek Township, within Township 6 North, Range 2 West of the Ohio River Survey, portions of Sections 2, 8, and 9. The Property is an irregularly shaped parcel of land, generally on a low ridge surrounded on three sides by Cross Creek. The Property address is 4243 County Road 74 (also known as Gould Road). The coordinates of the main entrance from County Road 74 are 40°18'32" North latitude and 80°40'10" West longitude, which is approximately 0.3 mile west of the intersection with Scott Featner Road. The Property has 24-hour security to restrict unauthorized entry. The proposed Project will be conducted within an approximately 170-acre portion of the Property, as indicated on ***Figure 2***. This BE focuses on this Project Area, but the entire Property is described for context.

The legal owner of the Property is Cyprus. The contact information for the responsible person at Cyprus is:

Barbara Nielsen
Manager, Remediation Projects
Cyprus Amax Minerals Company
333 North Central Avenue
Phoenix, Arizona 85004
Telephone: (602) 366-8100
Fax: (602) 366-7313
E-mail: bnielsen@fmi.com

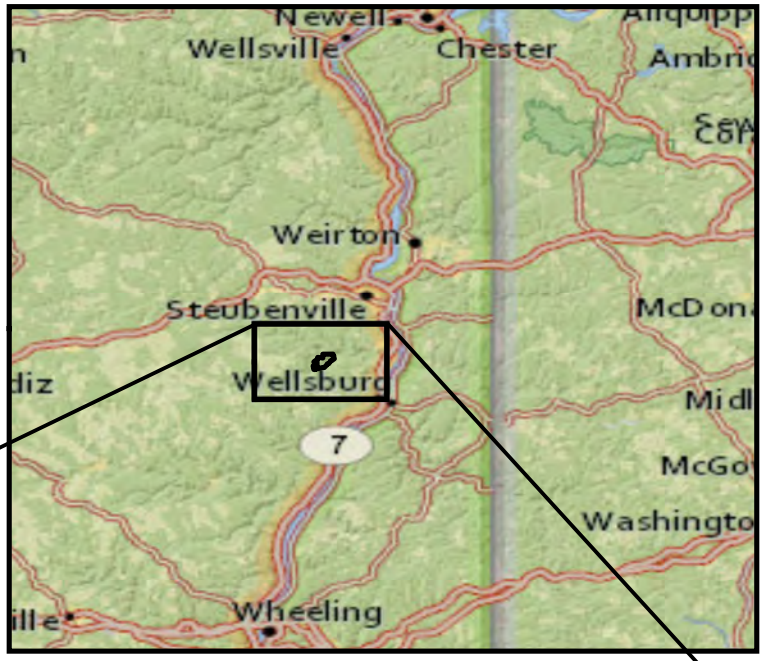
WestLand is providing technical support to Cyprus for authorization from the US Army Corps of Engineers (the Corps) to fill certain on-site waters of the US under the Corps' Clean Water Act Section 404 permit program as required for the proposed Project, and for potential Project effects to federally listed species that may occur on the Property. Contact information for the responsible person at WestLand is:

Christopher Rife
Senior Project Manager
WestLand Resources, Inc.
4001 East Paradise Falls Drive
Tucson, Arizona 85712
Telephone: (520) 206-9585
E-mail: crife@westlandresources.com

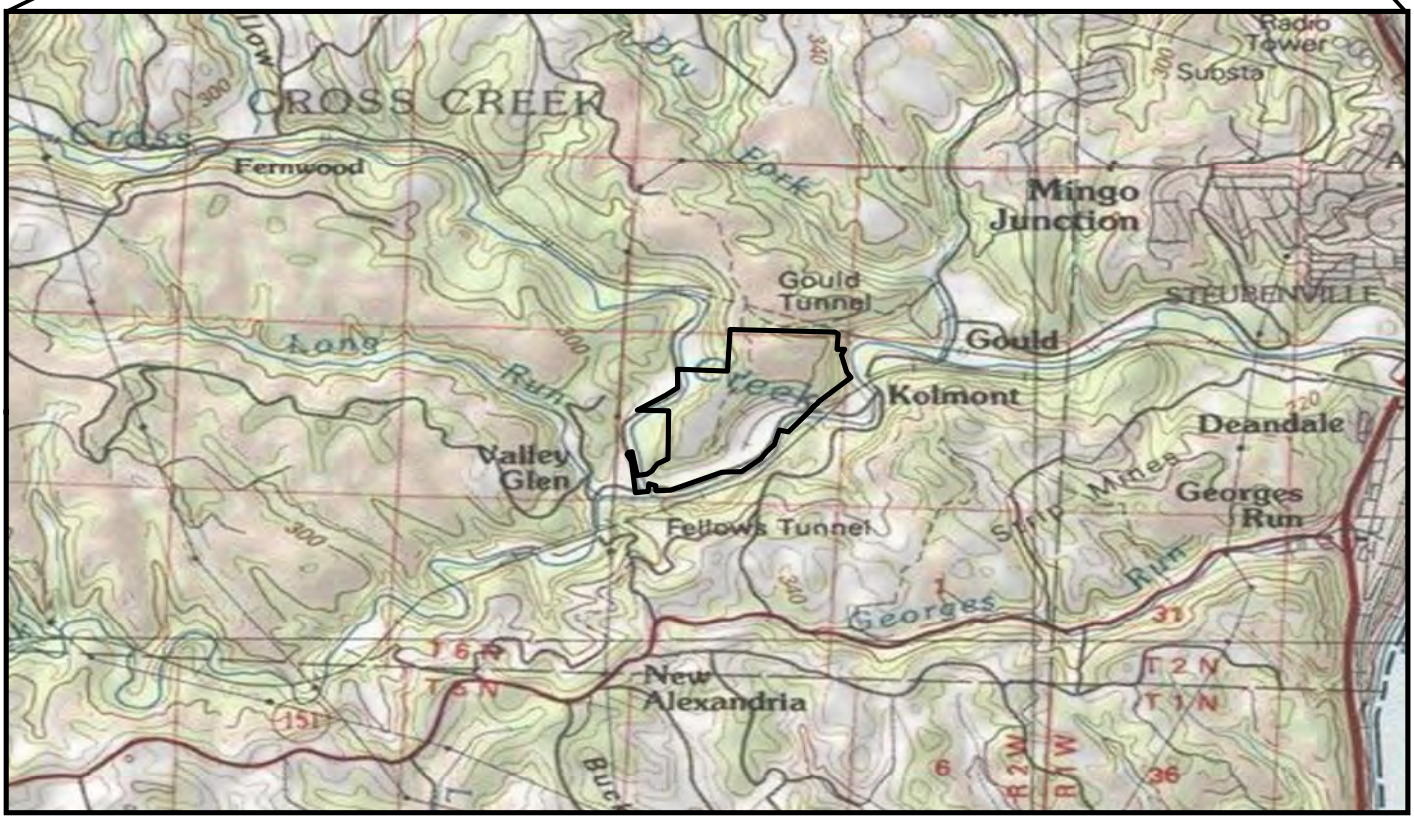
OHIO

PROJECT LOCATION

PORTION OF JEFFERSON COUNTY



Approximate Scale 1 Inch = 12 Miles



T06N, R02W, Portion of Sections 2, 8 & 9,
Jefferson County, Ohio
Image Source: ESRI Online USA Topo Map

Legend

Property Boundary

WestLand Resources, Inc.
Tucson • Phoenix • Flagstaff
4001 E. Paradise Falls Drive
Tucson, Arizona 85712 (520) 206-9585

N

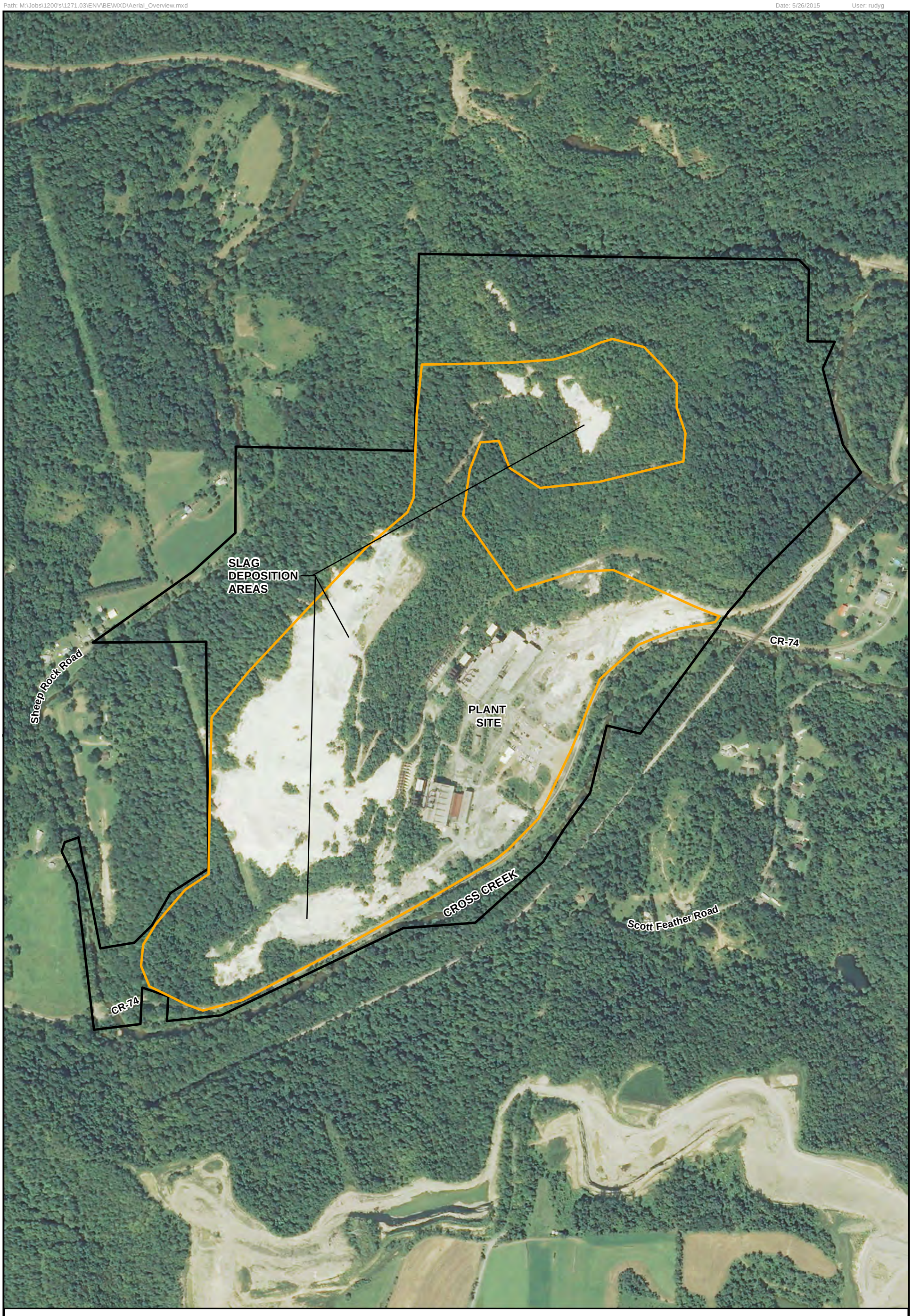
0 3,000 6,000 Feet

0 1,000 2,000 Meters

Former Satralloy Project
Environmental Support
Biological Evaluation

VICINITY MAP
Figure 1

Path: M:\Jobs\1200's\1271.03\ENV\BE\MXD\Aerial_Overview.mxd Date: 5/26/2015 User: rudyg



T06N, R02W, Portion of Sections 2, 8 & 9,
Jefferson County, Ohio
Image Source: National Agriculture Imagery Program, 2013

WestLand Resources, Inc.
Tucson • Phoenix • Flagstaff
4001 E. Paradise Falls Drive
Tucson, Arizona 85712 (520) 206-9585

N

0 300 600 Feet

0 100 200 Meters

Legend

Project Area

Property Boundary

Former Satralloy Project
Environmental Supportt
Biological Evaluation

Aerial Overview

Figure 2

3. SITE DESCRIPTION

The Property is located on a ridge that is surrounded on three sides by Cross Creek, a perennial stream that discharges to the Ohio River some 4 miles downstream (east) of the site. Topographically, the Property elevation ranges from about 700 feet above mean sea level (amsl) along Cross Creek up to a high point of about 1,120 feet amsl on the ridge northeast of the main slag pile (***Figure 2***). Very steep slopes are located above the former ferrochromium alloy processing plant area and near Cross Creek on the northwest side of the site. Springs, seeps, and ephemeral-to-intermittent drainages on the Property discharge to Cross Creek.

The Property has been subject to a variety of industrial uses during the 20th century, including coal mining and chromium ore processing. Currently, second-growth hardwood forest covers much of the Property but, based on aerial photography (***Figure 2***), roughly one-third of the Property is devoid of vegetation. Most of the vegetation loss on the Property resulted from the former operation of the ferrochromium alloy processing plant, from the 1950s through the 1980s. Large areas of the Property are covered by slag from the chromium smelting operation; solid slag was transported to deposition sites in the southern portion of the Property by truck while a thick slurry was pumped through pipelines to other deposition sites in the northern portion of the Property. Much of the ore processing equipment has been removed from the Property, and those structures that do remain will be demolished as a part of the proposed Project (described in the next section). A network of roads, mostly related to the smelter operations and slag disposal, crosses the Property. During plant operations, two railroad spurs entered the Property from the east, near the trestle over County Road 74, to provide rail access for material delivery and product shipment. The rail infrastructure was removed after plant closure. Tracks have recently been rebuilt on the lower spur to provide rail access for delivering heavy equipment and removing demolition debris when the remaining industrial buildings are demolished.

Earlier uses of the Property included coal mining and farming. Both underground and strip coal mining methods were used in the first quarter of the 1900s. Some of the strip mine areas have been partially filled with the pumped slag from the chromium ore processing described above. There are also traces of older roads related to the coal mining activities. The industrial plant area was formerly occupied by a small farm. It is not known if the farm was active concurrently with the coal mining.

Modern activities in the vicinity include railroad transportation, residence, and recreation. An active line of the Wheeling and Lake Erie Railroad follows the Cross Creek valley and the alignment abuts the northeastern Property boundary; the railroad spur into the Property mentioned above connects to this main line. Another active rail line passes through the Gould Tunnel near the north boundary of the Property. An electrical transmission line corridor crosses the western end of the Property. Rural residences and small communities are present surrounding the Property; a residential area known as Kolmont lies just to the east.

Recreational use in the area includes hunting, fishing, and off-road vehicle use. Birds and mammals present in forested areas surrounding the Property are available as game. A private hunting club occupies

a parcel abutting the southwestern edge of the Property. Cross Creek is fished recreationally, but a health advisory recommends limited consumption (Ohio EPA 2014). The Property itself, after industrial operations ceased, was heavily used as a recreation site by trespassing all-terrain vehicle (ATV) riders. Most of their impact has been on the slag areas and roads mentioned above, but some other trails were created through the forested areas. Cyprus has taken steps to exclude trespassers and ATV use on the Property. A chain-link fence has been installed along County Road 74 adjoining the plant site, guard rails have been constructed to block other former ATV access points, and 24-hour security has been established on the Property.

4. PROPOSED PROJECT

The proposed Project includes two phases (running semi-concurrently) required by the Ohio Environmental Protection Agency (OEPA):

- Interim Actions (IAs), consisting of work to secure the site. A security fence has been installed along the Property frontage to County Road 74 and a 24-hour security detail assigned.
- Remedial Investigation/Feasibility Study (RI/FS), consisting of materials sampling and analysis to determine the nature and extent of contamination. When these activities are completed, a study will be conducted to identify the most feasible remedy for the site.

As part of the IAs, industrial buildings will be demolished and removed, some hazardous waste removed, and other safety measures implemented.

After these phases are complete, it is anticipated that a third phase, Remedial Actions, consisting of implementing the remedy identified during the feasibility study, will be scoped and scheduled after the RI/FS is complete.

The proposed Project includes discharging fill material in two small streams and one wetland that are considered waters of the US, and will require authorization by the Corps under their authority from the CWA Section 404 permit program. The streams are in the industrial plant portion of the site. Feature E lies between the two large abandoned mill buildings, and Feature K is north of the northernmost mill building. Feature D is a wetland within the plant site but east of the mill buildings, and Feature E discharges (through a culvert) to this wetland. These features are depicted in ***Figure 2***.

Minor earthwork may be required to support other IAs or RI/FS activities. All of these activities will occur within the Project Area outlined in ***Figure 2***; none of these activities are planned in or near potentially jurisdictional waters of the US or to occur with the heavily forested area of the site. As mentioned above, at some point in the future Remedial Actions will be defined in negotiation with the OEPA. This BE will be updated at that time to evaluate the potential effects that Remedial Actions may have on federally listed species.

5. METHODS

The general habitat conditions on the Property were initially observed during site visits by WestLand biologists in May and July 2006. The biologists completed a pedestrian survey of the entire Property, observing biological conditions in the forested areas, disturbed areas, and aquatic habitats. Site visits on November 11 and 12, 2014 confirmed that there have been no substantial changes in the habitat conditions on the Property since the 2006 field work.

WestLand compiled lists of plant and animal species observed on the Property. Standard references and field guides were used to identify plant material (Braun 1967; Cooperrider 1995; Cusick and Silberhorn 1977; Fisher 1988; Horn and Cathcart 2005; Petrides 1998; Rhoads and Block 2000). Standard field guides were also used to assist in identifying vertebrate species (Bowers et al. 2004; Conant and Collins 1998; National Geographic Society 2006). Observations included visual sightings of species as well as other evidence of presence such as vocalizations, tracks, scat, nests, burrows, or gnaw marks. Current taxonomic information for plants and animals was obtained from the Integrated Taxonomic Information System (ITIS 2014).

Information on the presence of threatened, endangered, proposed, or candidate plant and animal species in Jefferson County was obtained from a variety of sources (ODNR 2013; ODNR 2015; USFWS 2015; and NatureServe 2014). We used the following criteria to classify the potential for special-status species to occur in the Project Area:

Present – The species has been observed in the Project Area during the site visit or Ohio Department of Natural Resources (ODNR)/USFWS records or other reliable source document that the species has been observed in the Project Area.

Possible – The species has not been documented in the Project Area, but the known, current distribution of the species includes the Project Area and the required habitat characteristics of the species appear to be present in the Project Area.

Unlikely – Generally, the known, current distribution of the species does not include the Project Area, but the known distribution of the species is relatively close to the Project Area. We consider species that are highly mobile and rare across the landscape unlikely to occur if their known distribution includes the Project Area and suitable habitat characteristics may be present.

None – The Project Area is outside the known distribution of the species and/or the habitat characteristics required by the species are not present.

6. RESULTS

6.1. FLORA AND FAUNA

Over 190 species of trees, shrubs, vines, and herbaceous plants have been identified on the Property. Plant species observed on the Property, including their wetland indicator status, are listed in ***Table 1***. About two-thirds of the Property is covered by a diverse second-growth hardwood forest (***Photograph 1***).

Common tree species in this area include sugar maple (*Acer saccharum*), several species of oak (*Quercus* spp.), Ohio buckeye (*Aesculus glabra*), and green ash (*Fraxinus pennsylvanica*). Eastern hemlock (*Tsuga canadensis*) is present on the north-facing slopes. Common understory shrubs include poison ivy (*Toxicodendron radicans*), common elderberry (*Sambucus nigra*), black raspberry (*Rubus occidentalis*), and multiflora rose (*Rosa multiflora*). Numerous species of grasses, forbs, and ferns are also present.

Aquatic features on the Property (including the riparian corridor of Cross Creek, a few small tributary streams, and several small wetlands) support a variety of aquatic plants (***Photographs 2 through 5***). Common plants in aquatic areas include American elm (*Ulmus americana*), American sycamore (*Platanus occidentalis*), narrowleaf willow (*Salix interior*), narrowleaf cattail (*Typha angustifolia*), and a variety of sedges (*Carex* spp.) and rushes (*Juncus* spp.).

Large portions of the Property have been subjected to a variety of disturbances, as described above (***Photographs 6 through 11***). Some of the second-growth forest stands noted above are present on or adjacent to areas of slag deposition or coal mine spoil piles. Additionally, the disturbed parts of the Property have several exotic and invasive plant species, including spotted knapweed (*Centaurea stoebe*), Canada thistle (*Cirsium arvense*), common dandelion (*Taraxacum officinale*), white sweetclover (*Melilotus albus*), and Johnson grass (*Sorghum halepense*) (***Photograph 12***).

The structural and species diversities of the plant communities on the Property allow for the presence of many animal species. Observations of vertebrate species include 11 mammal species, 54 bird species, six reptiles, and eight amphibians. Animal species observed on the Property are listed in ***Table 2***. ***Photographs 13 through 17*** depict a green frog (*Lithobates clamitans*), red-spotted newt (*Notophthalmus viridescens viridescens*), common snapping turtle (*Chelydra serpentina*), eastern box turtle (*Terrapene carolina*), and northern black racer (*Coluber constrictor*), respectively, observed on-site. Numerous bird species are known or expected to breed in the second-growth forest on the Property, including eastern phoebe (*Sayornis phoebe*) (***Photograph 18***). A wide diversity of invertebrate species, primarily insects, was observed on the Property, including butterflies and dragonflies (***Photographs 19 and 20***).

6.2. SPECIAL-STATUS SPECIES

Two federally listed species are identified by the USFWS as potentially present in Jefferson County. However, the USFWS has determined that the Project would not adversely affect either species. The ODNR Division of Wildlife does not have any records of either species at or near the Property (ODNR 2015)[1]. The USFWS and ODNR documentation is provided in ***Appendix B***. The following sections describe these two species and their potential to occur on the Property.

1 ODNR records indicate that one state-sensitive species, the longnose dace, was observed in Cross Creek in 1983. This species is not listed by the USFWS.

6.2.1. Indiana Bat

The Indiana bat (*Myotis sodalis*) was identified as in danger of extinction in 1967 under the Endangered Species Preservation Act of 1966, and listed as an endangered species in 1973 under the Endangered Species Act. It is possible that the Indiana bat would be present on the Property because suitable habitat is present and this species is mobile and migrates seasonally. However, information from the ODNR Division of Wildlife (ODNR no date) states that the Indiana bat is absent from the southeastern hill country of Ohio in the unglaciated Allegheny Plateau, an area that includes Jefferson County. Indiana bats are reported to be absent from Ohio during the winter because of a lack of suitable hibernacula (NatureServe 2014), although there are a few records of Indiana bats hibernating in caves in Ohio (ODNR, no date).

The designated critical habitat for this species does not include any sites in Ohio (USFWS 1976). The Indiana bat recovery plan (USFWS 1983) lists four cave sites in Ohio with Indiana bats, but assigns these sites a low priority with no protection needs. The cave sites are located in Adams, Highland, and Hocking counties, in the south central part of Ohio 100 to 200 miles southwest of the Property.

In 2008, a preliminary survey was conducted to evaluate the Property for suitable habitat for Indiana bats (Tragus 2008). This survey concluded that the Property and vicinity provide suitable habitat for the Indiana bat. The report describes the well-developed second-growth forested areas with a high diversity of tree species with opportunities for maternity roost sites. Wetland and old strip mine ponds provide opportunities for drinking and foraging. Old roads through the forest are heavily rutted and ponded, providing additional foraging opportunities and movement corridors.

> **Potential for Occurrence:** There is possibility that Indiana bats could forage or roost in the Project Area.
>
> **Potential for Project Effect:** The proposed Project is unlikely to affect the Indiana bat. The proposed activities would occur at two small streams and a wetland within the industrial portion of the site, removed from the heavily forested area where the species may occur.

6.2.2. Northern Long-Eared Bat

The northern long-eared bat (*Myotis septentrionalis*) was listed as a threatened species in April 2015 (USFWS 2015). No critical habitat is proposed for this species.

The northern long-eared bat uses caves and abandoned underground mines for winter hibernacula. During the summer months, the northern long-eared bat roosts in tree snags and crevices or under loose or sloughing bark (USFWS 2013). The species prefers wooded areas with moderate to high canopy cover. The Property is within the current range and contains the required wooded habitat conditions for the northern long-eared bat, indicating the potential for this species to be present. The characteristics identified by Tragus (2008) that make the site suitable for Indiana bat also apply to suitability for the

northern long-eared bat. Natural limestone caves are not present on the Property, and there are no openings into any former underground coal mines on the Property.

Potential for Occurrence: There is possibility that northern long-eared bats could forage or roost in the Project Area.

Potential for Project Effect: The proposed Project is unlikely to affect the northern long-eared bat. The proposed activities would occur at two small streams and a wetland within the industrial portion of the site, removed from the heavily forested area where the species may occur.

7. CONCLUSIONS

Two federally listed species, the Indiana bat and the northern long-eared bat, are reported by USFWS to occur in Jefferson County. The Property occurs within the known range of both bats and contains suitable habitat. There is no designated critical habitat for either species at or near the Property.

The USFWS has concluded that the Project would not adversely affect either species. The streams and wetland that will be filled are in the industrial plant portion of the Property and suitable habitat for either species is not present nearby. The IA and RI/FS tasks will occur within the disturbed areas of the Property or along the vegetated edges of the slag deposits. The heavily forested portions of the site where the bats are most likely to occur would not be affected by these tasks. This evaluation will be updated at a future date, when the Remedial Actions are identified, to determine if those future actions may affect special-status species.

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Table 1. Plant species observed on former Satralloy Site, Jefferson County, Ohio

Family	Scientific Name	Common Name	Wetland Indicator Status *
Aceraceae	*Acer negundo*	Boxelder	FAC+
	Acer rubrum	Red Maple	FAC
	Acer saccharum	Sugar Maple	FACU
Alismataceae	*Alisma subcordatum*	American Water Plantain	OBL
Anacardiaceae	*Rhus typhina*	Staghorn Sumac	UPL
	Toxicodendron radicans	Eastern Poison Ivy	FAC
Annonaceae	*Asimina triloba*	Pawpaw	FACU+
Apiaceae	*Cicuta maculata*	Spotted Water Hemlock	OBL
	Daucus carota	Queen Anne's Lace	UPL
	Heracleum sphondylium ssp. *montanum*	Common Cowparsnip	FACU
	Osmorhiza claytonii	Clayton's Sweetroot	FACU
	Osmorhiza longistylis	Aniseroot	FACU
	Pastinaca sativa	Wild Parsnip	UPL
	Thaspium barbinode	Hairyjoint Meadowparsnip	UPL
Apocynaceae	*Apocynum cannabinum*	Indianhemp	FACU
	Vinca minor	Common Periwinkle	UPL
Araceae	*Arisaema triphyllum*	Jack-in-the-pulpit	FACW
Asclepiadaceae	*Asclepias incarnata*	Swamp Milkweed	OBL
	Asclepias syriaca	Common Milkweed	UPL
	Asclepias tuberosa	Butterfly Milkweed	UPL
Asteraceae	*Achillea millefolium*	Common Yarrow	FACU
	Centaurea stoebe	Spotted Knapweed	UPL
	Cichorium intybus	Chicory	UPL
	Cirsium arvense	Canada Thistle	FACU
	Erigeron strigosus	Prairie Fleabane	FACU+
	Eupatorium altissimum	Tall Thoroughwort	UPL
	Eupatorium fistulosum	Trumpetweed	FACW
	Eupatorium perfoliatum	Common Boneset	FACW+
	Helianthus divaricatus	Woodland Sunflower	UPL
	Inula helenium	Elecampane Inula	UPL
	Smallanthus uvedalia	Hairy Leafcup	UPL
	Solidago sp.	Goldenrod species	undetermined
	Symphyotrichum laeve	Smooth Blue Aster	UPL
	Taraxacum officinale	Common Dandelion	FACU
	Tussilago farfara	Coltsfoot	FACU
Berberidaceae	*Caulophyllum thalictroides*	Blue Cohosh	UPL

Table 1. Plant species observed on former Satralloy Site, Jefferson County, Ohio

Family	Scientific Name	Common Name	Wetland Indicator Status *
	Podophyllum peltatum	Mayapple	FACU
Betulaceae	*Alnus serrulata*	Hazel Alder	OBL
Boraginaceae	*Mertensia virginica*	Virginia Bluebell	FACW
Brassicaceae	*Alliaria petiolata*	Garlic Mustard	FACU
	Barbarea vulgaris	Garden Yellowrocket	FACU
	Cardamine diphylla	Broadleaf Toothwort	FACU+
	Hesperis matronalis	Dames Rocket	UPL
Cannabaceae	*Celtis occidentalis*	Common Hackberry	FACU
Caprifoliaceae	*Lonicera canadensis*	American Fly Honeysuckle	FACU
	Lonicera japonica	Japanese Honeysuckle	FAC-
	Sambucus nigra ssp. *canadensis*	Common Elderberry	FACW
	Symphoricarpos albus	Common Snowberry	FACU-
	Viburnum lentago	Nannyberry	FAC
	Viburnum prunifolium	Blackhaw	FACU
Caryophyllaceae	*Dianthus armeria*	Deptford Pink	UPL
	Stellaria pubera	Star Chickweed	UPL
Clusiaceae	*Hypericum perforatum*	St. Johnswort	UPL
Convolvulaceae	*Calystegia sepium*	Hedge False Bindweed	FAC
Cornaceae	*Cornus amomum*	Silky Dogwood	FACW
	Cornus florida	Flowering Dogwood	FACU
	Nyssa sylvatica	Sourgum	
Crassulaceae	*Sedum ternatum*	Woodland Stonecrop	UPL
Cyperaceae	*Carex frankii*	Frank's Sedge	OBL
	Carex interior	Inland Sedge	OBL
	Carex laevivaginata	Smoothsheath Sedge	OBL
	Carex stricta	Upright Sedge	OBL
	Carex vulpinoidea	Fox Sedge	OBL
	Eleocharis sp.	Spike-rush	FACW or OBL
	Schoenoplectus tabernaemontani	Softstem Bulrush	OBL
	Scirpus atrovirens	Green Bulrush	OBL
	Scirpus cyperinus	Woolgrass	FACW+
	Scirpus pendulus	Rufous Bulrush	OBL
	Scirpus polyphyllus	Leafy Bulrush	OBL

Table 1. Plant species observed on former Satralloy Site, Jefferson County, Ohio

Family	Scientific Name	Common Name	Wetland Indicator Status *
Dipsacaceae	*Dipsacus fullonum*	Fuller's Teasel	NI
Eleagnaceae	*Elaeagnus umbellata*	Autumn Olive	UPL
Equisetaceae	*Equisetum arvense*	Field Horsetail	FAC
Fabaceae	*Cercis canadensis*	Eastern Redbud	FACU
	Gleditsia triacanthos	Honey-locust	FAC
	Melilotus albus[2]	White Sweetclover	FACU
	Melilotus officinalis	Yellow Sweetclover	FACU-
	Robinia pseudoacacia	Black Locust	FACU
	Securigera varia	Crownvetch	UPL
	Trifolium campestre	Field Clover	UPL
	Trifolium pratense	Red Clover	FACU
	Trifolium repens	White Clover	FACU
Fagaceae	*Fagus grandifolia*	American Beech	FACU
	Quercus alba	White Oak	FACU-
	Quercus bicolor	Swamp White Oak	FACW+
	Quercus montana	Chestnut Oak	UPL
	Quercus rubra	Northern Red Oak	FACU
Geraniaceae	*Geranium maculatum*	Spotted Geranium	FACU
Grossulariaceae	*Ribes americanum*	American Black Currant	FACW
	Ribes cynosbati	Eastern Prickly Gooseberry	UPL
Hippocastanaceae	*Aesculus glabra*	Ohio Buckeye	FACU+
Hydrophyllaceae	*Hydrophyllum appendiculatum*	Great Waterleaf	UPL
	Hydrophyllum virginianum	Eastern Waterleaf	FAC
	Phacelia purshii	Miami Mist	UPL
Juglandaceae	*Carya ovata*	Shagbark Hickory	FACU
	Juglans nigra	Black Walnut	FACU
Juncaceae	*Juncus dichotomus*	Forked Rush	FAC
	Juncus effusus	Common Rush	FACW+
	Juncus gerardii	Saltmeadow Rush	FACW+
	Juncus tenuis	Poverty Rush	FAC

[2] According to the US Department of Agriculture plant database (accessed online November 26, 2014), *Melilotus alba* is recognized as *Melilotus officinalis*. According to the Integrated Taxonomic Information System (ITIS) (accessed online August 25, 2014), *Melilotus albus* is different from *Melilotus officinalis* and is recognized as its own species.

Table 1. Plant species observed on former Satralloy Site, Jefferson County, Ohio

Family	Scientific Name	Common Name	Wetland Indicator Status *
Lamiaceae	*Glechoma hederacea*	Ground Ivy	FACU
	Lamium purpureum	Purple Deadnettle	UPL
	Prunella vulgaris	Common Selfheal	FACU+
	Pycnanthemum loomisii	Loomis' Mountain Mint	UPL
Lauraceae	*Sassafras albidum*	Sassafras	FACU-
Lemnaceae	*Lemna minor*	Common Duckweed	OBL
Liliaceae	*Ornithogalum umbellatum*	Sleepydick	FACU
	Maianthemum racemosum	Feathery False Lily of the Valley	FACU
	Polygonatum biflorum	Smooth Solomon's Seal	FACU
	Trillium grandiflorum	White Trillium	UPL
Magnoliaceae	*Liriodendron tulipifera*	Tuliptree	FACU
Oleaceae	*Fraxinus pennsylvanica*	Green Ash	FACW
Oxalidaceae	*Oxalis stricta*	Common Yellow Oxalis	UPL
Papaveraceae	*Sanguinaria canadensis*	Bloodroot	NI
Pinaceae	*Tsuga canadensis*	Eastern Hemlock	FACU
Plantaginaceae	*Collinsia verna*	Spring Blue Eyed Mary	FAC-
	Plantago lanceolata	Narrowleaf Plantain	UPL
	Plantago major	Common Plantain	FACU
Platanaceae	*Platanus occidentalis*	American Sycamore	FACW
Poaceae	*Agrostis gigantea*	Redtop	FACW
	Bromus arvensis	Field Brome	FACU-
	Dactylis glomerata	Orchardgrass	FACU
	Dichanthelium commutatum	Variable Panicgrass	FACU+
	Elymus hystrix	Eastern Bottlebrush Grass	UPL
	Elymus repens	Quackgrass	UPL
	Festuca subverticillata	Nodding Fescue	FACU
	Glyceria striata	Fowl Mannagrass	OBL
	Hordeum jubatum	Foxtail Barley	FAC
	Hordeum pusillum	Little Barley	FAC
	Phleum pratense	Timothy	FACU
	Poa compressa	Canada Bluegrass	FACU
	Poa palustris	Fowl Bluegrass	FACW
	Sorghum halepense	Johnsongrass	FACU

Table 1. Plant species observed on former Satralloy Site, Jefferson County, Ohio

Family	Scientific Name	Common Name	Wetland Indicator Status *
	Sporobolus cryptandrus	Sand Dropseed	UPL
Polygonaceae	*Fallopia japonica* var. *japonica*	Japanese Knotweed	FACU
	Fallopia sachalinensis	Giant Knotweed	UPL
	Persicaria maculosa	Spotted Ladysthumb	FACW
	Persicaria pensylvanica	Pennsylvania Smartweed	FACW
	Rumex acetosella	Sheep Sorrel	UPL
	Rumex crispus	Curly Dock	FACU
Polypodiaceae	*Adiantum pedatum*	Northern Maidenhair	FAC-
	Athyrium filix-femina	Common Ladyfern	FAC
	Dryopteris carthusiana	Spinulose Woodfern	FAC+
	Onoclea sensibilis	Sensitive Fern	FACW
	Polystichum acrostichoides	Christmas Fern	FACU
	Woodwardia areolata	Netted Chainfern	FACW+
Ranunculaceae	*Aquilegia canadensis*	Wild Columbine	FAC
	Ranunculus repens	Creeping Buttercup	FAC
	Ranunculus sp.	Buttercup	
Rosaceae	*Crataegus chrysocarpa*	Fireberry Hawthorn	UPL
	Crataegus crus-galli	Cockspur Hawthorn	FACU
	Fragaria virginiana	Virginia Strawberry	FACU
	Geum canadense	White Avens	FACU
	Geum laciniatum	Rough Avens	FAC+
	Malus pumila	Paradise Apple	UPL
	Physocarpus opulifolius	Common Ninebark	FACW-
	Potentilla norvegica	Norwegian Cinquefoil	FACU
	Prunus serotina	Black Cherry	FACU
	Rosa multiflora	Multiflora Rose	FACU
	Rosa virginiana	Virginia Rose	FAC
	Rubus idaeus	American Red Raspberry	FAC-
	Rubus occidentalis	Black Raspberry	UPL
	Rubus ulmifolius	Himalayan Blackberry	NI
Rubiaceae	*Diodella teres*	Poorjoe	UPL
	Galium aparine	Stickywilly	FACU
Rutaceae	*Zanthoxylum americanum*	Common Prickly-ash	UPL
Salicaceae	*Populus alba*	White Poplar	UPL
	Populus deltoides	Eastern Cottonwood	FAC
	Populus grandidentata	Bigtooth Aspen	FACU-
	Salix interior	Narrowleaf Willow	OBL
	Salix sp.	Willow	

Table 1. Plant species observed on former Satralloy Site, Jefferson County, Ohio

Family	Scientific Name	Common Name	Wetland Indicator Status *
Saxifragaceae	*Mitella diphylla*	Twoleaf Miterwort	FAC+
Scrophulariaceae	*Verbascum thapsus*	Common Mullein	UPL
Simaroubaceae	*Ailanthus altissima*	Tree of Heaven	NI
Solanaceae	*Solanum nigrum*	Black Nightshade	FACU-
Staphyleaceae	*Staphylea trifolia*	American Bladdernut	FAC
Typhaceae	*Typha angustifolia*	Narrowleaf Cattail	OBL
Ulmaceae	*Ulmus americana*	American Elm	FACW
Urticaceae	*Boehmeria cylindrica*	Smallspike False Nettle	FACW+
	Laportea canadensis	Canadien Woodnettle	FACW
	Urtica dioica	Stinging Nettle	FACU
Valerianaceae	*Valerianella chenopodiifolia*	Goosefoot Cornsalad	UPL
Violacea	*Viola blanda*	Sweet White Violet	FACW
	Viola pubescens	Downy Yellow Violet	FACU-
	Viola sagittata	Arrowleaf Violet	FACW
	Viola sororia	Common Blue Violet	FAC-
Vitaceae	*Parthenocissus quinquefolia*	Virginia Creeper	FACU
	Vitis labrusca	Fox Grape	FACU
	Vitis riparia	Riverbank Grape	FACW
Zosteraceae	*Potamogeton* sp.	Pondweed	OBL

* Wetland Indicator Status Definitions:

OBL - Obligate wetland plants. Almost always (>99% occurrence) found in wetlands.
FACW - Facultative wetland plants. Usually occur in wetlands (67% to 99% occurrence), but may also occur in non-wetlands.
FAC - Facultative plants. Have similar likelihood of occurring in wetland or non-wetland conditions.
FACU - Facultative upland plants. May occur in wetlands (estimated 1% to 33% occurrence), but usually in non-wetlands (67% to 99% occurrence).
UPL - Upland plants. Rarely occur in wetlands (estimated <1% occurrence), almost always in non-wetland conditions.
NI - No indicator status. Growth conditions are so varied that these species are not useful in defining wetland conditions.
Plus (+) or minus (-) signs indicate a greater or lesser probability of occurring in wetland conditions.

Table 2. Animal species observed on former Satralloy Site, Jefferson County, Ohio

Scientific Name	Common Name
MAMMALS	
Didelphis virginiana	Virginia Opossum
Sylvilagus floridanus	Eastern Cottontail
Tamias striatus	Eastern Chipmunk
Marmota monax	Woodchuck
Sciurus niger	Eastern Fox Squirrel
Castor canadensis	American Beaver
Canis latrans	Coyote
Vulpes vulpes	Red Fox
Procyon lotor	Raccoon
Sus scrofa	Wild Boar
Odocoileus virginianus	White-tailed Deer
BIRDS	
Branta canadensis	Canada Goose
Anas platyrhynchos	Mallard
Lophodytes cucullatus	Hooded Merganser
Bonasa umbellus	Ruffed Grouse
Meleagris gallopavo	Wild Turkey
Ardea herodias	Great Blue Heron
Butorides virescens	Green Heron
Cathartes aura	Turkey Vulture
Pandion haliaetus	Osprey
Buteo jamaicensis	Red-tailed Hawk
Falco sparverius	American Kestrel
Porzana carolina	Sora
Charadrius vociferus	Killdeer
Zenaida macroura	Mourning Dove
Coccyzus americanus	Yellow-billed Cuckoo
Chaetura pelagica	Chimney Swift
Megaceryle alcyon	Belted Kingfisher
Picoides pubescens	Downy Woodpecker
Picoides villosus	Hairy Woodpecker
Colaptes auratus	Northern Flicker
Dryocopus pileatus	Pileated Woodpecker
Sayornis phoebe	Eastern Phoebe
Vireo griseus	White-eyed Vireo
Vireo solitarius	Blue-headed Vireo
Vireo olivaceus	Red-eyed Vireo
Cyanocitta cristata	Blue Jay
Corvus brachyrhynchos	American Crow
Stelgidopteryx serripennis	Northern Rough-winged Swallow
Hirundo rustica	Barn Swallow
Poecile carolinensis	Carolina Chickadee
Sitta carolinensis	White-breasted Nuthatch
Thryothorus ludovicianus	Carolina Wren
Hylocichla mustelina	Wood Thrush

Table 2. Animal species observed on former Satralloy Site, Jefferson County, Ohio

Scientific Name	Common Name
Turdus migratorius	American Robin
Dumetella carolinensis	Gray Catbird
Mimus polyglottos	Northern Mockingbird
Toxostoma rufum	Brown Thrasher
Sturnus vulgaris	European Starling
Setophaga petechia	Yellow Warbler
Setophaga virens	Black-throated Green Warbler
Setophaga ruticilla	American Redstart
Parkesia motacilla	Louisiana Waterthrush
Geothlyspis trichas	Common Yellowthroat
Spizella passerina	Chipping Sparrow
Melospiza melodia	Song Sparrow
Cardinalis cardinalis	Northern Cardinal
Pheucticus ludovicianus	Rose-breasted Grosbeak
Passerina cyanea	Indigo Bunting
Agelaius phoeniceus	Red-winged Blackbird
Quiscalus quiscula	Common Grackle
Icterus galbula	Baltimore Oriole
Haemorhous mexicanus	House Finch
Spinus tristis	American Goldfinch
Passer domesticus	House Sparrow
REPTILES	
Chelydra serpentina	Common Snapping Turtle
Terrapene carolina	Eastern Box Turtle
Chrysemys picta	Painted Turtle
Nerodia sipedon	Northern Water Snake
Thamnophis sirtalis	Eastern Garter Snake
Coluber constrictor	Northern Black Racer
AMPHIBIANS	
Desmognathus fuscus	Dusky Salamander
Notophthalmus viridescens viridescens	Red-spotted Newt
Anaxyrus americanus	American Toad
Anaxyrus fowleri	Fowler's Toad
Pseudacris crucifer	Spring Peeper
Lithobates catesbeianus	North American Bullfrog
Lithobates clamitans	Green Frog
Lithobates sylvaticus	Wood Frog

APPENDIX A

SITE PHOTOGRAPHS

Photo point: PP1
View: Drainage in second-growth forest, upslope from north smelter building.

Photo point: PP2
View: Looking downstream along Cross Creek, northwestern portion of site. Note second-growth forest on slope at left, compared to cleared pasture land and road at right.

Photo point: PP3
View: Seepage area at head of wetland, downslope from isolated slag pile.

Photo point: PP4
View: Isolated wetland area at plant site. Little soil development in this former gravel parking area, despite plant growth.

Photo point: PP5
View: Wetland conditions on abandoned railroad grade in eastern portion of site. Note cattails at left in channel along alignment.

Photo point: PP6
View: Overview of south smelter building at plant site, showing ponded water and fringe vegetation within former parking area at left, second-growth forest at right, and ridgetop slag piles in center background.

Photo point: PP7
View: Second-growth forest encroaching upon slag pile on ridgetop at southern extent of ridge

Photo point: PP8
View: Isolated wetland at plant area; slag piles in background. Note lack of soil development in gravel fill.

Photo point: PP9
View: Drainage near ridgetop in second-growth forest area, northwest of main slag area. Note chemical precipitate in channel, with no riparian vegetation.

Photo point: PP10
View: Ponded water on ridgetopat northeast end of main slag pile. Note emergent vegetation, including cattails, rushes, and bulrush.

Photo point: PP11
View: Pond in closed basin of former coal strip mine area.

Photo point: PP12
View: Spotted knapweed (*Centaurea stoebe*) near edge of parking area.

Photo point: PP13
View: Green frog (*Lithobates clamitans*) on slag material at edge of pond in abandoned strip mine area.

Photo point: PP14
View: Red-spotted Newt (*Notophthalmus viridiscens viridiscens*) in pond in abandoned strip mine area.

Photo point: PP15
View: Common snapping turtle (*Chelydra serpentina*) observed on road northeast of main slag area.

Photo point: PP16
View: Eastern box turtle (*Terrapene carolina*) observed on slope north of smelter area.

Photo point: PP17
View: Northern black racer (*Coluber constrictor*) observed on slope north of smelter area.

Photo point: PP18
View: Eastern phoebe (*Sayornis phoebe*) nest observed on boulder adjacent to Cross Creek.

Photo point: PP19
View: Spicebush swallowtail (*Papilio troilus*) near wetland area on upper slag pile.

Photo point: PP20
View: Twelve-spotted skimmer (*Libellula pulchella*) on cattails north of smelter area.

APPENDIX B

USFWS AND ODNR RECORDS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Columbus Ohio Field Office
4625 MORSE ROAD, SUITE 104
COLUMBUS, OH 43230
PHONE: (614)416-8993 FAX: (614)469-8994

Consultation Code: 03E15000-2015-SLI-1081 May 15, 2015
Event Code: 03E15000-2015-E-00358
Project Name: Former Satralloy Site

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see http://www.fws.gov/migratorybirds/RegulationsandPolicies.html.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit http://www.fws.gov/migratorybirds/AboutUS.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project

planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

Official Species List

Provided by:

Columbus Ohio Field Office
4625 MORSE ROAD, SUITE 104
COLUMBUS, OH 43230
(614) 416-8993

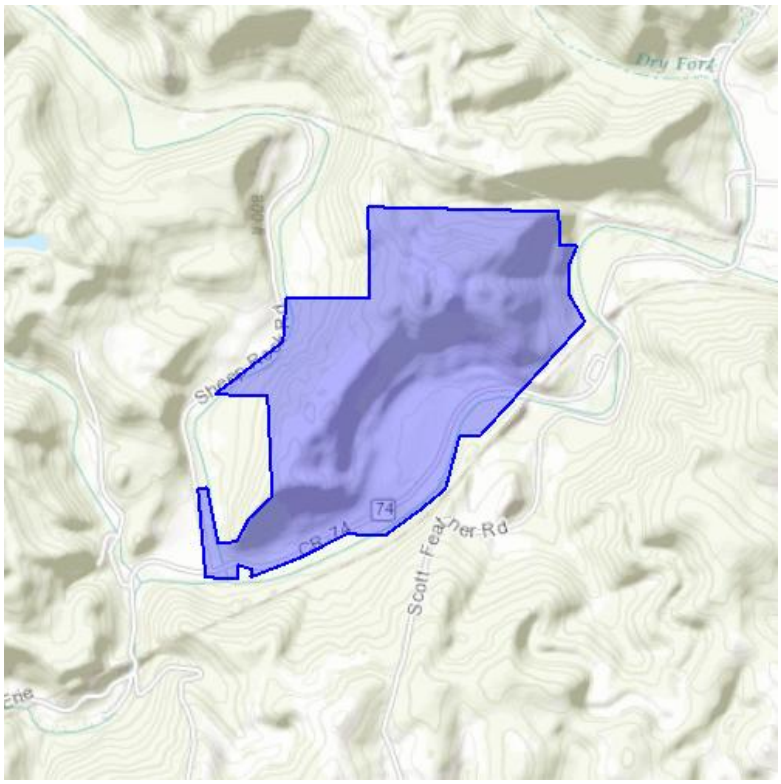
Consultation Code: 03E15000-2015-SLI-1081
Event Code: 03E15000-2015-E-00358

Project Type: ** OTHER **

Project Name: Former Satralloy Site
Project Description: Scoping for activities involving the remediation of hazardous material within site boundaries.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-80.67275762557983 40.318327904535565, -80.66333770751953 40.31814793718315, -80.6632947921753 40.31687179128705, -80.66243648529053 40.31683906928025, -80.66286563873291 40.31618462581407, -80.66286563873291 40.31500661159037, -80.6620931625366 40.31399219398513, -80.66724300384521 40.30970529326064, -80.66827297210693 40.30970529326064, -80.66895961761475 40.30774173641796, -80.6702470779419 40.306890844057975, -80.67187786102295 40.30597448645171, -80.67380905151367 40.306072668218434, -80.67604064941406 40.305189027180226, -80.67852973937987 40.304403558775256, -80.67848682403564 40.30473083838731, -80.67913055419922 40.30486174978813, -80.67917346954344 40.30437083072685, -80.68071842193604 40.304403558775256, -80.6811475753784 40.30770900998695, -80.6806755065918 40.30777446283314, -80.6801176071167 40.30571266770939, -80.6792163848877 40.30577812249009, -80.67861557006836 40.3066290288676, -80.67745685577393 40.307414471394225, -80.67767143249512 40.31124337291458, -80.68028926849365 40.31127609763302, -80.67689895629883 40.31327227547191, -80.67681312561035 40.31487571985247, -

80.67265033721924 40.31487571985247, -80.67275762557983 40.318327904535565)))

Project Counties: Jefferson, OH

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	**Status**	**Has Critical Habitat**	**Condition(s)**
Indiana bat *(Myotis sodalis)* Population: Entire	Endangered		
Northern long-eared Bat *(Myotis septentrionalis)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

John Melko

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>
Sent: Tuesday, March 24, 2015 8:42 AM
To: John Melko
Subject: Former Satralloy Facility - Westland No. 1271.02, Jefferson Co. OH

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994

TAILS# 03E15000-2015-TA-0909

Dear Mr. Melko,

We have received your recent correspondence requesting information about the subject proposal. There are no Federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area.

LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS: Due to the project, type, size, and location, we do not anticipate adverse effects to federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

If you have additional questions or require further assistance with your project proposal, please contact me at the following number (614) 416-8993. In addition, you can find more information on natural resources in Ohio, and a county list of federally threatened and endangered species in Ohio, by visiting our homepage at: http://www.fws.gov/midwest/ohio.

Sincerely,

Dan Everson

Field Office Supervisor

Ohio Division of Wildlife
Scott Zody, Chief
2045 Morse Rd., Bldg. G
Columbus, OH 43229-6693
Phone: (614) 265-6300

March 20, 2015

John Melko
Westland Resources, Inc.
4001 E. Paradise Falls Dr.
Tucson, AZ 85712

Dear Mr. Melko,

Per your request, I have e-mailed you a set of shapefiles with our Natural Heritage Program data for the Satralloy Remediation project, including a one mile radius, in Cross Creek Township, Jefferson County, Ohio. This data will not be published or distributed beyond the scope of the project description on the data request form without prior written permission of the Natural Heritage Program.

Records included in the data layer may be for rare and endangered plants and animals, geologic features, high quality plant communities and animal assemblages. Fields included are scientific and common names, state and federal statuses, as well as managed area and date of the most recent observation. State and federal statuses are defined as: E = endangered, T = threatened, P = potentially threatened, SC = species of concern, SI = special interest, FE = federal endangered, FT = federal threatened and A = recently added to inventory, status not yet determined.

In addition to the species given in the data shapefile, there is a record for one or more sensitive species within your project study area. Please be aware that we do not give out specific locations for sensitive species, therefore a generalized location is shown in the sensitive species shapefile.

The managed areas layer includes state, federal and county lands, as well as areas owned by non-profits, museums and other entities. Managed areas are sites under formal protection for their natural resources. Please be aware that this layer may not be complete and we are continually updating it as new information becomes available to us.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke

Debbie Woischke
Ohio Natural Heritage Program

Longnose Dace 9/16/1983

APR - 2 2007

OHIO HISTORY

March 27, 2007

Christopher Rife
WestLand Resources, Inc.
2343 E. Broadway Blvd., Suite 202
Tucson, AZ 85719

Dear Mr. Rife:

Re: Satralloy Site Remediation, Cross Creek Township, Jefferson County, Ohio

This is in response to your letter of March 15, 2007 concerning the proposed project. Our comments are submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act, as amended (36 CFR 800).

Based on the information you provided, the former Satralloy facility does not appear to meet the criteria for listing on the National Register of Historic Places. We concur that the proposed remediation will not affect historic properties. No further coordination is required unless the scope of the work changes or historic properties are discovered.

If you have any questions please contact me at 298-2043 or through e-mail at jquinlan@ohiohistory.org.

Sincerely,

Julie A. Quinlan

Julie Quinlan, Program Reviews Manager
Resource Protection and Review

1011680

OHIO HISTORICAL SOCIETY
Ohio Historic Preservation Office
567 East Hudson Street, Columbus, Ohio 43211-1030 ph: 614.298.2000 fx: 614.298.2037
www.ohiohistory.org